THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

VOL. CVII.—No. 3747. JULY 10, 1914.

THE MEANS OF ARCHITECTURAL EXPRESSION.

IT is said there is nothing new under the sun, and the saying is more nearly true than we often think it is. The desire of the ancient Athenian and the ambition of the modern architect seem similar in that both have sought novelty which has appealed to them as being good in itself and its discovery a consummation devoutly to be wished. But it may well be that such a search for novelty is in architecture doomed to end in disappointment, and, if so, it is necessary to consider why such a result cannot be attained.

For those who think that new forms of building and the use of new materials are likely to lead to the development of new styles in which modern requirements and necessities can be better expressed we have every sympathy so long as they do not try to force the pace by deliberately inventing forms which in many cases make the solution of our problems no easier. If we analyse architectural wants we shall find them in nearly every case variants of wants we already have met in structure, and we are inclined to think it is not sufficiently recognised that a mean must be struck between what is structurally possible and what is æsthetically desirable, or, in other words, it can be demonstrated that there can be no perfectly satisfactory æsthetic solution to many structural problems, and no mere invention of new forms can in the least assist us along the road which we have to travel. If this be so, we are simply deluding ourselves with vain hopes which prevent us making the best compromise we can, which is frequently in the nature of things bound to be a commonplace one.

The essential fact seems to be that whether L'Art Nouveau is employed by an acknowledged genius like Herr Otto Wagner, or by some of the novices who are responsible for the design of the newer buildings in Ostend and other towns, the result is alike unsatisfactory. Modern German art generally altogether fails to give us anything which is at all comparable in artistic value with the work designed by the stylist, and even the gifted and art-loving French nation succeeds little better when it makes attempts in the same direction of development.

In this country we have not suffered so severely from the deliberate efforts of architects to invent; but even here we have architects who appear to be chiefly anxious to do what has never been attempted before. In this issue we illustrate a most excellent school in Derbyshire, the designer of which is a well-known expert in school design and construction who has carried the scientific planning of schools and their adaptation to hygienic wants further than anyone else in the particular field in which he has worked.

It will be seen in our inset illustrations that the exterior design of the building has been carried out on lines which, for want of a better title, we may term either L'Art Nouveau or modern German in type, and the architect, to whom in common with all those who have studied his work we give full measure of appreciation, has willingly consented to our illustrating our points by a reference to this particular design. As will be observed, the treatment of the elevations and their detail is based on unfamiliar lines, and has been carefully and thoroughly thought out in every way. Nowhere do we find features which remind us even distantly of any known style; originality of design is displayed throughout.

The architrave round the front entrance doorway follows no known precedent, the colonnades of the verandahs internally bear no likeness to any style we know of, and the reinforced concrete dome is detailed on more or less original lines.

It may be said without fear of contradiction that Mr. Widdows has employed far more ingenuity and devoted more time to his design than would have been needed had he chosen an ordinary Georgian rendering of the same subject, which, we take it, would have given a design on some such lines as those we have roughly indicated on the next page, in which masses of the same size and form and windows with the same spacing have been used. For purposes of comparison it is assumed that the central hall in our sketch, like that in Mr. Widdows' design, is covered with a ferro-concrete dome; but whereas in the executed design the detail is carefully worked out, in our sketch the general lines of the design are only roughly shown. Now, comparing the two methods of treatment, we would ask our readers to say whether any tangible advantage has been gained by originality, or, on the other hand, whether there is not a certain definite loss in the abandonment of traditional means of expression? Would not a simple turned column of Georgian proportions be a pleasanter feature than the posts and bases shown in the photographs, and can it not be urged that either would have been equally sound constructionally?

What may, we think, be said in this case with truth applies to many other buildings in our cities. We have blocks of buildings in which the usual cornice is absent, buildings with columns of unusual proportion and capitals of varied detail, panels where we least expect them, and architectural designs in which all the usual horizontal bands are absent.

We do not believe that it is owing to lack of talent that architects can make nothing but dismal failures of such elements as these. They evidently fail because they are trying the impossible task of expressing their thoughts in a language they are inventing for the occasion, and are concentrating thought on detail which should be given to the disposition of mass and proportion.

It is difficult to imagine how the forms of the Orders and other details of classical architecture were originated; it is more difficult to see how we can add one cubit to their stature; and the experience of centuries would tend to show that to vary these forms to any extent satisfactorily is beyond the wit of man, while our knowledge of the architecture of long centuries shows us that almost every theme can be played on them by their use in certain combinations of mass and outline.

An almost Eastern effect can be obtained, as in the Palais de Justice at Brussels, by detail only varying in degree from that employed by our own Renaissance masters, and it seems to us we have a range of notes with which we can express any thought or purpose we wish without the introduction of a new style.

The term style in architecture may be likened to language, and holds the same relation to it that language does to speech. Just in the same way that we must express ourselves when speaking in some one language, so we must express architectural thought in some one style, and in the same way that languages have been the result of centuries of development so have styles in architecture. We know that languages have been originated and are the result of growth, though it is almost impossible to trace their earliest stages, and to a less degree it is often almost impossible to trace the earliest growth of style

Style has this further likeness to language that it is out of the combination of certain well-understood elements that perfection must be sought; the same language, the words of which may serve to express the meaning of an imperfectly educated man haltingly and badly, in other combination and arrangement forms the eloquence of a great writer or speaker. Just as in language words are the immutable elements by which every varying thought may be expressed, so in architecture the elements of style may be made to express every shade of meaning. Languages vary in beauty and complexity, but the combinations possible in any one of them vary to an infinitely greater degree, and thus it is with the so-called architectural styles, nearly all of which form a medium through which perfection, mediocrity, or failure may be expressed.

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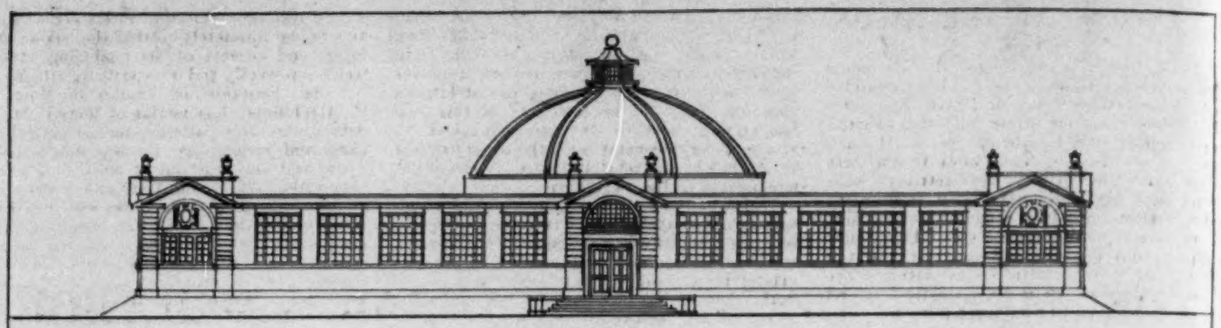


ILKESTON SCHOOL: A SUGGESTION

And just as it is impossible to imagine the invention of a new language which would give us greater powers of expression than those which we possess, so we cannot imagine the invention of a new style which would give us greater latitude of expression than the styles we already have. Similarly we know we cannot express ourselves otherwise than haltingly in a language with which we are not thoroughly familiar, so in architecture we can do nothing until we are familiar with the elements of a style.

And these facts enable us to appreciate the immense value of architectural tradition, the basis of which was the knowledge and usage of one style only as an expression of thought. Until a hundred years ago we had tradition, whether good or indifferent, with us. That is to say, we had knowledge of one architectural style in which all buildings were executed—a knowledge which had come to us from the preceding generation, a knowledge which, modified by experience and gradual accretions and eliminations, was handed on to succeeding generations. It was natural that under such conditions the work of our forefathers should express a clear and definite aim and lucidity of purpose and conviction which are absent to-day, and which must in some way or other be recovered if we are to leave to future generations an inheritance comparable with that we have received from the past.

What is, is, and will be, in style, and the effort of men may recoil, baffled, from attempts to add to or substract from its detail. What may or may not be is the thought and genius which, like liquid fire, may distinguish our grasp and use of the elements of design when dealing with mass and form.

The changes brought about by the introduction of machinery and the specialisation of industries are factors from the influence of which we cannot escape, nor can we hark back to the slower methods of former days, much as we may think they have had a beneficial influence in the past; but it may be possible to educate all alike in the conviction that it is only by the consistent practice of a clearly-understood architectural tradition that we can hope that the work of to-day may occupy a worthy place on the roll of time.

NOTES.

An Opportunity for a Minister of Art.

THE inauguration in the island of Guernsey of a statue to Victor Hugo is one of those happy events which serve to emphasise the international value of art and to strengthen the friendship now existing between France and England. The inhabitants of Guernsey are naturally proud to think that one of the greatest of French writers should have lived and worked in their midst, and the importance of the occasion may be judged by the fact that both the Governments of England and France were represented. The mission from France was headed by the Minister of Public Instruction, supported by two other ministers and by the Under-Secretary for Fine Arts. That from England was headed by the First Commissioner of Works, supported by several officials, none of whom, however, seem to have any special claim to represent art. The Government may be fortunate in having as spokesman one so well fitted to give felicitous expression to its sentiments; but, however great the personal qualifications of the present First Commissioner, it is impossible to regard the chief of the Office of Works as being qualified by his office to speak in the name of the art of the country. We cannot help thinking that it would be more in accordance with the fitness of things—that it would tend to affirm the value and the dignity of art—if on such ceremonial occasions the country could be represented by a Minister of Art.

The Exhibition of British Architecture in Paris.

AT the Architectural Association a very interesting series of students' drawings of the various British schools are now on exhibition. Nothing could give the general public a better idea of what is being done by our schools of architecture, whose continuous efforts are absolutely necessary if the architecture of the future is to be a worthy addition to that of the past. The work of the schools as shown exhibits much variety of aim and method. Some of it, and notably that from Glasgow, is evidently obsessed by the excellence of French methods and architecture, and would rather make a French *esclave* on English soil than add new force to our own architectural records. Another tendency shown in some of the very able work produced by the Liverpool School is an inclination to accept the style of the Greek Revival and Neo-Grec developments as being the last word in architectural design. To us it appears that to use the Greek Doric column in the present is about as much to the point as the introduction of a model of the dodo into an aviary. We have already dealt with some of the very excellent work which is being done by the Architectural Association, which is well in the van of architectural progress, and we have also reviewed much of the design being carried out under the auspices of the Atelier, an institution which, by reason of its constitution, can be most helpful to practising architects as well as students. The work of the Royal Academy School which is shown does not rise to the highest standard, and that of the Edinburgh School is distinctly disappointing. The examples of design from the Royal College of Art at South Kensington are easily first and foremost of any in the exhibition. Professor Pite has evidently inculcated the lesson that, important as draughtsmanship is, thought and design are even more so. The work of his students also shows that they have learnt what the Italian Renaissance means and how the spirit which inspires it can be made effective to-day. We shall in our next Students' Review give some reproductions of the drawings from the Royal College now on view at the Association.

The British School at Rome.

THE Royal Commissioners for the Exhibition of 1851 have awarded the Rome Scholarship in Architecture to Mr. Philip Dalton Hepworth on the recommendation of the Faculty of Architecture of the British School at Rome; and on the recommendation of the same body the Royal Institute of British Architects have awarded the Rome Studentship to Mr. Ernest Cormier. The Jarvis Studentship is awarded on the result of the final competition for the Rome Scholarship to the student who is placed next in order of merit to the winner of the Rome Scholarship. Mr. Hepworth is twenty-six years of age and has studied at the Architectural Association and the École des Beaux-Arts. He was elected an Associate of the R.I.B.A. in 1912. Mr. Cormier is a French-Canadian, and was born at Montreal in 1885. He is a Bachelor of Applied Science of the Polytechnic School at Montreal, and obtained the Certificate of Study at the École des Beaux-Arts. We hope the conditions for the competition in design which the students competing for these prizes have to sit for may be somewhat simplified, for, as we pointed out when criticising the drawings submitted, the student who has to think out the details of a large amount of practical accommodation for a public building and who does so conscientiously has too much to do adequately to devote himself to the problem of design set. It thus follows that a competitor who gives less thought to the practical problem may succeed better in general design—a difficulty which can be obviated either by setting simpler subjects or by giving a partially worked-out plan of a more difficult and complex one.

SCULPTURE AT THE SALON, 1914.

COMING from the two congested little rooms which the authorities at the Academy consider sufficient for the display of British sculpture, we are always struck afresh with the splendid opportunities which are given to French sculptors to show off their work to the best advantage. The public can actually walk round each piece and examine it from every point of view. Surely it would be worth while, if the Academy will make no move, for English sculptors to hire a suitable hall once a year and have a really representative exhibition. The close interdependence between architecture and sculpture can only be made plain to the man in the street if he can have an opportunity of seeing sculpture in its proper setting, as he can at the Salon, and as he certainly cannot at the Academy. It would, of course, be absurd to suggest that French sculpture owed its superiority over British work wholly to the manner in which it is exhibited, but that it is one of the contributory causes we cannot doubt. The Academy sets a strict limit to the scale on which work can be shown, and ties the hands of sculptors in much the same way that English publishers fetter novelists by insisting on getting six shillings'-worth of words, neither more nor less, with every novel without considering whether the theme of the book has any relation to its compulsory length. In France certainly they do these things better, and a French sculptor has the immense advantage of being able to see his own monumental work alongside other designs of the same nature, and thus of realising how he stands in relation to his fellows.

He has another advantage also, and that is, he does not work with one eye on the Chantrey Bequest—that baneful influence which has done so much to keep English sculpture timid and banal, because it never has and never will venture to buy any piece of work that shows courage and originality. If the English sculptor can produce work of a certain smoothness and finish, showing a correct knowledge of anatomy and a delicate turn of sentiment, he can count on having his work bought for the nation sooner or later and his reputation made. Can one wonder, then, that English sculpture never advances, merely showing itself sometimes a little less skilful and sometimes a little more, always aiming for the same things—things, by the way, that the Greeks did a great deal better many centuries ago?

We are bound to confess, however, that the Salon is by no means free from work of this class. There are plenty of specimens which suggest that the artist has looked about for a model with a pretty figure, placed her on a throne, waited till she happened to take a picturesque pose, and then copied her in stone or marble as accurately and minutely as he could, finishing off by smoothing away any little roughnesses his tools may have left till he gets the entire surface equally shiny and characterless all over. Stepping back from his masterpiece, he consults a stock list of titles and labels his work with the least inappropriate one he can find. The number of poses which to this class of "artist" suggest "Meditation" or "Reverie" is a never-failing source of wonder to us. Any attitude with the head bent seems to come under one of these titles, and those with head erect are called after our first mother, or no other conceivable reason than their nudity. This class of work nearly always deals with nude figures, because drapery cannot be copied—it must be designed—and that needs thought and something more than technical ability.

Well, the results of this system are often quite nice to look at, and so long as we are careful to avoid using the word "art" in connection with them they do very well for garden ornaments, especially when time has weathered them a little and their pristine whiteness changes to pleasant variations of yellow and green.

Serious sculpture, of course, is something very different from this, and we are glad to be able to say that there is still plenty of it in France and good deal to be seen at the Salon. Such work falls naturally into two groups—one in which the artist is simply trying to express an idea in plastic form, complete in itself, and without conscious thought of the surroundings in which it may eventually be placed, and the other in which he is primarily concerned to make his work a part of an architectural scheme, the highest form, in fact, of architectural ornament. These two great divisions seem to be better understood in Paris than here, where, with the exception of the late Alfred Stevens's work, there are few instances of the sculptor really grasping the architect's point of view. To be convinced of this one has only to compare the pedestals given to groups at the Academy with the same features at the Salon, or, better still, look at the street monuments in the two cities.

Which of these two great divisions of sculpture is the greater art it were futile to inquire, but it is perhaps worth noting that those works which by common consent are considered masterpieces combine the good qualities of both. The Elgin marbles are still supreme works of art, though torn from their setting, but they are also perfect types of architectural ornament.

Such complete fusion of all the aims of sculpture only occurs, however, at the brief moments when a nation's art is at its zenith, and at periods like the present we must content ourselves with something a little less ambitious. So long as artists can consider their works in terms of mass, can give proper emphasis to the principal planes, and can produce a scheme of light and shade which has coherence and beauty—so long, in fact, as they approach their task with their brain and do not allow mere observation of fact and manual skill to usurp the chief places—we shall get work of really permanent value. This tendency to substitute cleverness for thought is only too evident at the Salon. There is far too much work there which can only tell us how cunning a hand has produced it and how empty is the brain that should have controlled the hand. The general public is willing enough to be content with photographic skill in the rendering of useless details, which accounts for the popularity of this kind of work and the comparative neglect of better things. But even the most ignorant can see through the same artists, when, caught by some wind of modernity, they try to be naïve and childlike, to reproduce the spirit of primitive art. A modern Parisian attempting to revive the feeling that animated the sculptor of the Apollo of Tenea would not deceive an infant. Yet there are examples in the present Salon of that and other similar follies. It is useless to attract further attention to these stupidities by giving the names of their perpetrators; they will be forgotten in a year or two, while the names of Bouchard, Jean-Boucher, de Villiers, Hulin, Abbal, Desruelles, Gaumont, and others should live.

Bouchard's "Nicholas Rollin" is a figure of quite exceptional merit, with something of the splendid dignity and grandeur of Constantin Meunier's work. His smaller "Portrait de Jeune Fille," a bust in stone, is also quite remarkably good, full of vitality and a sense of style. These two works are essentially French and directly related to the great French tradition, yet perfectly fresh and original. They form one more proof, if one were needed, of the fact that it is not necessary to break with all tradition in order to preserve individuality.

Another artist who also bases his work on the older French masters is Abbal. He has revived an old mediæval tradition in his use of colour, and has so intimately related the colour to the forms and accents of his modelling that the result is perfectly and unexpectedly satisfactory.

"The Fountain of Dames of Yore," by C. Alaphilippe, has merits of design, but the details, the dress patterns, and accidental little folds and creases are far too much insisted upon, and are quite out of place in a work of this scale. The main lines and masses have considerable dignity and force, and would have more did not these trivialities, well done though they are, distract the attention and lead the eye away from the centre of interest. Another fountain, by Emile Boisseau, shows a clever mingling of bronze and stone and a certain light and Gallic fancifulness which undeniably has charm, but which, we feel, might easily become wearisome had we to live with it. Of more solid merit is M. Marcel Gaumont's "Génie Ailé," one of the most impressive monuments in the exhibition. This sculptor has been slowly getting further and further from the aims and ideals of the Ecole des Beaux-Arts, but only in the direction of a deeper and fuller conception of the possibilities of his art. It is not so much a revolt against accepted canons, as the addition to them of vitality and emotion, without which they must remain but empty rules. Another artist who has travelled the same road is M. Desruelles, who, in his "Jeune Berger et Jeune Fille," reminds us of J. F. Millet.

Among the younger men, M. de Villiers is conspicuous with his "Vierge à l'Enfant," a group whose religious motive is admirably conveyed by the simplicity and restfulness of the composition. Another group of great interest, also intended, we believe, for Père Lachaise, is Morel's "Statue Funéraire." Both these pieces are quite free from the sickly sentimentalism and sham religiosity which disfigure so much of the work done for this purpose.

M. Poncin exhibits a "Nausicaa" and a "Danseuse," which have all the charm and grace, the subtlety and yet breadth of treatment we have learnt to expect from this artist. An American, Mr. Evans, shows a gilt bronze statue which has somewhat the same virtues.

We have left till the last the work of two men who are each in their own way remarkable. They are Jean-Boucher and Hulin. The former contributes a "Fra Angelico" in marble. The painter raises his eyes to Heaven; his palette is in his hand. The grandly simple lines of the drapery lead the eye inevitably to the head, where the interest centres in the features, expressive of a noble serenity combined in some magic way with all the fire of religious enthusiasm. It is a great work worthy of its subject. The gulf between this and Hulin's "Fétiches" is immense, the one an expression of the finest spirit of Christianity, the other an ignorant African woman in semi-hysterical ecstasy over some meaningless mumbo-jumbo. But both are intensely living expressions of something the sculptors have keenly felt, and are therefore great art, which, after all, is the only excuse for torturing masses of stone and marble into the semblance of human beings.

"Autumn Wind," by M. Jean Boulois.
(From the Salon of 1914.)

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS:

BOARD OF ARCHITECTURAL EDUCATION.

WE give below the problems in design set by the Board for Subjects XVI., XVII., and XVIII.:—

The Final: Alternative Problems in Designs.

Instructions to Candidates.

1. The drawings, which should be on uniform sheets of paper of not less than Imperial size, must be sent to the Secretary of the Board of Architectural Education, Royal Institute of British Architects, 9, Conduit-street, W., on or before the dates specified below.

2. Each set of drawings must be signed by the author, and his full name and address, and the name of the school, if any, in which the drawings have been prepared, must be attached thereto.

3. All designs, whether done in a school or not, must be accompanied by a declaration from the student that the design is his own work and that the drawings have been wholly executed by him. In the preparation of the design the student may profit by advice.

4. Drawings for subjects (*a*) are to have the shadows projected at any angle of 45 deg. in line, monochrome, or colour. Drawings in subjects (*b*) are to be finished as working drawings. Lettering on all drawings must be in a clear scholarly character.

Subject XVI.

(*a*) An island on a river, about 240 ft. by 100 ft., is the site for an hotel and tea gardens. The usual accommodation for a country hotel, together with ample balconies, having suitable outlook, is to be provided. There should be accommodation for housing boats. The general level of the island is 8 ft. above the river, which in flood rises 6 ft.

Drawings Required.—Block plan to $\frac{1}{16}$-in. scale, with other drawings to $\frac{1}{8}$-in. scale.

(*b*) A dairy and farmstead (sixty cows).

Drawings Required.—Plans to $\frac{1}{16}$-in. scale. Elevations of portions and sections to $\frac{1}{4}$-in. scale, with $\frac{1}{2}$-in. scale details.

Subject XVII.

(*a*) A circular hall for meetings, concerts, etc., to seat 2,000. An organ, and the usual cloak-rooms and retiring-rooms, must be provided. The building to be considered as being on a detached site, and the façades to be in stone.

Drawings Required.—$\frac{1}{8}$-in. scale and a detail to $\frac{1}{2}$-in. scale.

(*b*) An elementary mixed school for 200 children, for a rural district. The area of the site not limited, but the school is to be designed on the corridor system. A manual instruction-room and a cookery school are to be included.

Drawings Required.—Block plan to $\frac{1}{16}$-in. scale. Other drawings to $\frac{1}{4}$-in. scale, and detail through hall to $\frac{1}{2}$-in. scale.

Subject XVIII.

(*a*) The organ-case in the circular hall (see Subject XVII. (*a*)). The longest pipe to be 32 ft.

Drawings Required.—$\frac{1}{4}$-in. scale with some details to not less than quarter full size.

(*b*) A group of small dwellings for twelve aged couples, to be considered from a practical point of view. Each dwelling to consist of at least two rooms. A common dining-hall and kitchen offices to be provided. Site having a frontage of 80 ft. looking south-east, on the outskirts of a town.

Drawings Required.—$\frac{1}{4}$-in. scale, and details of different portions to $\frac{1}{2}$-in. scale.

Dates for Submission of Designs in 1914-1915.

	Subject XVI.	Subject XVII.	Subject XVIII.
United Kingdom	Aug. 31	Oct. 31	Dec. 31
Johannesburg ...	Oct. 31	Dec. 31	Feb. 28
Melbourne	Nov. 30	Jan. 31	Mar. 31
Sydney	Nov. 30	Jan. 31	Mar. 31
Toronto	Sept. 30	Nov. 30	Jan. 31

FIVE TOWN-PLANNING SCHEMES.

The Local Government Board have given their authority for the preparation of town-planning schemes by the Corporations of Tynemouth and Huddersfield and the Urban District Council of Barnet. The scheme for Barnet affects an area of 2,214 acres in the urban district; that for Tynemouth relates to nearly 950 acres situated in the borough and the urban district of Whitley and Monkseaton; for Huddersfield there will be three schemes, for separate areas of 1,071, 913, and 310 acres respectively, lying within the confines of the borough.

ROYAL SANITARY INSTITUTE CONGRESS.

BLACKPOOL is the place of meeting of the Royal Sanitary Institute this week on the occasion of the twenty-ninth annual Congress, held under the Presidency of the Earl of Derby. The Congress is being attended by a large number of delegates representing the following bodies:—Foreign and Colonial Governments, six; Government departments, four; county councils, fifteen; county boroughs, fifty-five; metropolitan boroughs, six; boroughs, urban district councils, or sanitary authorities, 104; rural district councils, twelve; port sanitary authorities and others, twelve; education authorities, three; societies, universities, colleges, etc., forty-three. Amongst the latter are delegates from the Royal Institute of British Architects, the Society of Architects, the Surveyors' Institution, the Institution of Municipal and County Engineers, the Institution of Municipal Engineers, the Rural Housing Association, etc.

The Exhibition.

In connection with the Congress an Health Exhibition was, as usual, held, which enabled the general public to form some idea of the advances in sanitary science in this country. The Limmer Asphalte Paving Company, Ltd., of Caxton House, Westminster, exhibited specimens of natural rock asphalt, refined bitumen; samples of Lithofelt paving blocks in five thicknesses, with plain and grooved surfaces, etc. The Stourbridge Glazed Brick and Fire Clay Company, of Holly Hall, near Dudley, had a very complete exhibit of sanitary fittings, including specially-designed closets for schools, hospitals, etc. The "Firmit" Flooring Company, of Blackpool, showed "Firmit" jointless flooring and Lilywhyte marble floor covering. Messrs. Rowe Brothers & Co., of Liverpool, had on view selections of wood chimney-pieces and fireplaces and an assortment of bathroom and lavatory fittings. Messrs. Jones & Attwood Ltd., Stourbridge, exhibited their "Fiddien" and "J. & A." patent sewage-wheel distributors, two large working models being shown to illustrate the application of the sewage wheel to circular and rectangular beds for the sewage disposal of a country house, etc.

Other exhibitors were the Stimax Gas Stove Company, of North-street, Clapham, S.W.; the Silent Flushing Cisterns, Ltd., Sugar House-lane, Stratford, E., with the "Mute" cistern; Mr. J. H. Woodington, Clevedon, with the "Drain Tell-tale"; Messrs. Moore & Moore, Oxford, with their patent scientific sanitary closets; Messrs. Bristowe & Co., 11, Tothill-street, Westminster, showing non-set plastic cements, tarvia, etc.; Messrs. Renton, Gibbs, & Co., Ltd., with needle and shower baths, heating apparatus, etc.; E. A. Mansfield & Co., New Brighton, with their wireless electric pipe locator, for use by builders and contractors; the Gilmour Door Company, Ltd., of 51, Berners-street, London; the Austral Window Balance Company, Ltd., of Corporation-street, Manchester; Mr. W. Boby, Salisbury House, London, with different types of water softeners; the British Sanitary Company, Bath-lane, Glasgow, showing strong earth closets, designed for schools and workmen's houses; Moule's Patent Earth Closet Company, Ltd., of 2, Guilford-street, London, W.C.; and the Fire-proof Fibre Building Boards, Ltd., 26, Hart-street, London, W.C., with "Calno" sanitary building boards.

Official Opening of the Congress.

On Monday the Mayor of Blackpool presided at a public luncheon at the Hotel Metropole, at which the Earl of Derby and a large number of the leading citizens of the town were present.

Mr. Councillor J. Collins proposed the toast of the Royal Sanitary Institute, which he said now comprised 4,500 members and had done immense work for the good of the country.

Sir Henry Tanner (Chairman of the Council of the Institute) replied, and referred to the fact that the work of the Institute had extended all over the world. Its work had really become of an imperial character, and was held in great esteem by local authorities who had to select officers to administer sanitary matters.

Mr. E. T. Hall, F.R.I.B.A., in submitting the toast of "The Mayor and Corporation of Blackpool," said that in the domain of engineering and health Blackpool set an example to the world. He had looked at the Ordnance map for 1851, and could not even find Blackpool mentioned. In 1800 the place, which was then called by another name, only numbered 500 inhabitants. That was 114 years ago, and to-day, curiously enough, the population was just 114 times greater than it was. It was a town built on loamy sand, resting on a peat bog. Its promenade was 3½ miles long, and was being extended. Beneath that promenade it was not generally known that there were huge tanks into which the sewage of the town flowed and was afterwards pumped out to sea. It might well be said that out of a heap of sand had been raised a fairy city of palaces.

Mr. Alderman W. H. Hampson replied to the toast.

In the afternoon a public meeting was held at the Palace Theatre, at which the Earl of Derby delivered his presidential Address. His lordship disclaimed any intention of delivering a learned address. No doubt, he said, with assistance he could have produced an address which might have approached in value some of the addresses of his predecessors, but he would prefer to confine his remarks to one subject on which he did happen to know something, and which was one of the subjects not being dealt with in the Congress. The President proceeded to deal with the medical work carried on in connection with the British Army, and quoted statistics to show the vast improvements which had taken place. In conclusion, he welcomed the Congress in the name of Lancashire. They all knew how much health and happiness were associated, and inasmuch as that Institute was doing all it could to bring greater health for the population at large, so they were equally bringing with it happiness.

Dr. Perrin Norris, Mr. Kaye Parry (Dublin), the Mayor of Lancaster, Mr. W. Whitaker, and others spoke.

Conference of Engineers and Surveyors.

The section devoted to engineers and surveyors sat on Tuesday under the Presidency of Mr. J. S. Brodie, Borough Engineer and Surveyor, of Blackpool, who in his opening address pointed out that the outstanding subjects of the past year of greatest interest, not only to municipal engineers and surveyors, but also to the general public, who were interested in municipal government, had been (*a*) the construction and maintenance of highways; (*b*) housing and town planning; (*c*) water supply; (*d*) sewage disposal; and (*e*) labour unrest in municipal service. So far as could at present be seen, some form of macadamised road surface, bound with bituminous or asphaltic materials instead of with water, would be the road surface of the future for moderate amounts of traffic. Dealing with housing and town planning, the President said that from a Memorandum recently issued by the Local Government Board, for the year ending December 31 last, the results of the operations of local authorities under the Housing and Town Planning Act, 1909, were as follows:—55,707 houses were reported against: 18,107 houses were made fit for habitation without closing orders; 2,116 houses were closed or demolished voluntarily; 10,695 closing orders were made; 1,550 houses were demolished after the issue of closing orders; and 2,193 demolishing orders were made. For the three years ending March, 1913, 129,620 houses had been made fit for habitation at the cost of the owners; whilst for five years ending March 31, 1913, the Board had sanctioned loans amounting to £1,403,869 for the erection of 6,353 houses. As regarded the progress of town planning under the same Act up to December 31 last, two schemes had been finally approved by the Board of an area of 3,762 acres; three schemes had been prepared and submitted for an area of 6,503 acres; forty-seven schemes had been authorised to be prepared or adopted by local authorities of an area of 70,900 acres; and fourteen applications for authority to prepare schemes were under consideration by the Board of an area of 29,761 acres. During the four years that the Town Planning Act had been in operation it had been found that the procedure, especially in regard to work required to be done before even an application to the Board for authority to prepare a scheme could be made, was altogether too elaborate and irksome, and consequently the Board had recently issued amended town-planning procedure regulations whereby the preliminary work, especially in the preparation of maps, had been simplified without sacrificing any necessary safeguards. It was to be hoped that the result of these amended regulations would be materially to

speed up progress in town planning in the immediate future. On the more practical side of the subject of town planning might be noted the commencement during the past year of the actual laying out of the new capital of India, on the southern site closely adjacent to the ancient imperial city of Delhi, as recommended by Messrs. Swinton, Brodie, and Lutyens. Also the adoption in principle by the Government of Australia of the plan prepared by Mr. W. B. Griffin, of Chicago, for laying out the proposed new capital city of the Commonwealth, and which was awarded the first prize of £1,750. It was also satisfactory to find that in their own country the city of Birmingham had got its two schemes finally approved, and had actually commenced practical work in connection therewith.

In the domain of public water supplies the new scheme for an additional supply of 500 million gallons a day for the City of New York from the Catskill Mountains, a distance of 135 miles, at a cost of £35,000,000, easily created a record. A point of much importance to water authorities was the comparatively short period loans were allowed by the Local Government Board for reservoir construction. The only way to overcome this was in the increasing use of reinforced concrete construction, by which the first cost of the work was so much reduced that there was no extra burden in meeting repayment of loans for the shorter period.

Mr. Mawbey (Borough Engineer, Leicester) proposed a vote of thanks to the President, and this was seconded by Mr. C. Brownridge (Birkenhead) and carried.

Town Planning and Garden Cities.

Mr. T. G. Lumb opened a discussion on "Town Planning and Garden Cities," with a paper in which he first dealt at some length with the Blackpool district, and said the difficulties in such a district in the adoption of the Town Planning Act were that any schemes of town planning in the suburban areas would naturally be the ones next to the developed parts of the town, and as the speculative builder had reduced house-building to a science, he would take the sites that would yield the best return, and could not afford under the present conditions of building to give more than a minimum amount of land per house; this would tend to defer the development of the town-planning area and would drive the builders to areas outside the area affected by such limitations, and probably in some cases to outside rural authorities, who would derive all the benefits of the open spaces of the scheme and all the usual facilities of tramways, parks, baths, etc., and would also benefit by their increased rateable value.

The solution of the difficulties in town planning, so far as that district was concerned, would, in his opinion, be the inclusion of the adjoining urban and rural areas and the laying out of main trunk roads and the necessary open spaces and sites for public buildings, and then allow the individual owners to lay out their own land; as the subsidiary roads could not but be suitable offshoots, this would obviate the risk of unfair competition with the various owners if small areas were dealt with at various times. Blackpool must deal with the question of road widening in the very near future if she would live up to her motto of progress. At present there were large numbers of estate companies and private owners of small estates, all developing without any consideration of through communication. The author proceeded to describe what he did at Cleveleys in 1906 in laying out a portion of the Fleetwood Estate Company's land for the purpose of an exhibition of houses, etc. The houses were built of permanent materials and under the building by-laws as commonly adopted in urban districts. The exhibition showed that it was possible to build commodious and sightly houses at a reasonable cost. A good deal had been said about the hardships of the building by-laws in certain districts, and there were no doubt cases where restrictions verging on absurdity had been imposed, but at the same time it was widely held that with respect to minimum height of rooms and building material specified the objectors to the by-laws had not made out their case. Where stone or bricks and mortar were reasonably cheap, as they were in Lancashire and Yorkshire, these well-tried materials competed favourably, in cost of construction and maintenance, with the patented and other materials which had been advocated in some quarters, and, with the exception possibly of concrete, the supremacy of bricks and mortar at present was not seriously threatened.

Considerable development had taken place during the last eight years. Since the holding of the exhibition, houses ranging from £190 to over £1,000 had been erected, and the main avenue (west drive) had been asphalted, and the footpaths flagged with concrete flags; also the estate company had spent a considerable sum in tree planting and new tennis grounds, bowling greens, and clubhouses had been opened. Near to Cleveleys Park was Rossall Beach, laid out several years before the Cleveleys Park. The Fylde coast was not industrial except in the salt-mining district of Thornton, and Rossall Beach was purely residential, and was designed as a model coast resort. In the centre was a large reserved space for tennis and bowling greens. A concrete sea-wall, designed and carried out by the author, including a promenade, has superseded the old wooden hulking. The face of this sea-wall was concave with a bullnose top, which formed a convenient seat its whole length. The cost of this wall and promenade was under £3 per lineal yard run. On this estate there were no rows of villas all of the same design, with a grim aspect of assertive respectability. There was everywhere a sense of novelty and comfort, and a contrast to the stiff and prim formality of the architecture in some British seaside resorts. The Dutch stoop was seen here and there, evidently a feature that was appreciated by the people who had come to reside in these houses. Though the majority of the houses followed the same style, this was not compulsory, and purchasers might consult their own tastes within reasonable limits. The new open-air sea-water swimming bath at Rossall School, recently designed and erected by the author, was 170 ft. long by 120 ft. wide, and was built of reinforced concrete. The bath had a capacity of over 500,000 gallons. The baths were filled by an electrical centrifugal pump with a total head of 25 ft. and a capacity of 700 gallons per minute. The delivery pipe was 380 ft. long and 9 in. diameter, and the pipe was also used for emptying the bath.

An interesting movement was under consideration between Rossall School and Fleetwood. An estate some 300 acres in extent, also near the sea, was being laid out for the building of cottages, with large allotments of land. Fleetwood had a considerable artisan population, and the object of the promoters of the scheme was to attract the better class of artisans to live under more desirable conditions at reasonable rents, with opportunity of putting under cultivation a remunerative garden, which under the scheme would give permanent tenure. At the present time plots were laid out as allotment gardens, but the tenants were liable to disturbance owing to the rapid developments that were taking place; also the gardens were at some distance from their homes, which was not desirable. Under the proposed scheme the cottage and garden would occupy from ⅛ to ¼ acre, and all the conveniences in the form of drainage, gas, water, and electric light would be provided.

Mr. Willis (Chiswick) described the paper as an extremely useful one, although he did not quite agree with the author in his statement that very little had been done up to the present day in connection with town planning. He considered that Mr. Lumb had taken a somewhat pessimistic view of the matter. Considering the difficulties to be overcome he considered that a great deal had been done. Hundreds of local authorities had passed resolutions with regard to town planning, but, of course, that was only the commencement of a very difficult work. The serious difficulty was to bring together the owners of the land so as to get a complete scheme. Personally he was a strong believer in the Town Planning Act being compulsory. He did not mean that the whole of England should be planned in streets, but he did feel that the onus of guarding the amenities of their districts should be thrown on every local authority throughout the kingdom.

Mr. C. J. Jenkin (Finchley) said that in a way town planning would probably be compulsory in the future, as Mr. Samuel had outlined such a scheme with regard to the arterial roads. That would not mean that the actual laying out of the towns must be set down on paper, but it would mean that the development of towns on wrong lines would be stopped, and if they could stop development on wrong lines such development would probably go on on better lines. He was afraid that moral suasion, unless they had Parliamentary power at the back of them, was not of much use.

Mr. Gregson (Southport) pointed out that, after all, town planning in the end was a matter of finance and high land values were not compatible with the carrying out of schemes. If they reduced the number of houses to the acre, then the value of the acre must be less, and the landowner must look for his reward in securing that his land was more rapidly covered and more certainly covered, and also in the fact that he was doing his duty to the well-being of the community. Blackpool was at a disadvantage in the laying out of the streets, because the coast-line ran north and south. The inevitable result was that one side of the streets had an inferior aspect, and the only way they could get over that disadvantage was to give ample frontages to the houses built on the side of the road having the inferior outlook, so that alternate sunlight could be secured, and also to secure that the planning of the houses themselves, which was of even more importance than town planning, was diversified in character, so as to avoid the defects which had arisen from stereotyped planning of houses.

Mr. Munce (Belfast) suggested that in town planning they might take warning from the mistakes of their predecessors. If they did so, they would be blessed by their successors.

Mr. Lumb briefly replied and agreed that to a limited extent town planning should be compulsory. They ought to have the arterial roads fixed in the outlying districts before small owners began to develop.

Mr. A. J. Price (Eccles) followed with a paper on "The Sanitary Side of Town Planning," in the course of which he said that every town council should be compelled to prepare a town plan for their district, on which should be laid out the main arterial roads, the various areas reserved for civic, commercial, industrial, and residential purposes, with the number of houses allowed on the different residential areas, widths of the main and secondary roads, and the sites to be reserved for parks, open spaces, and recreation grounds. The water supply and sewerage systems, with the positions of the waterworks and pipes for distribution, and the sewers, outfall and sewage disposal works, should have their main lines and positions settled with due regard to future requirements, and the safeguarding of the health of the inhabitants of the district. The method of sewering, whether separate, combined, or partially separate systems, and the dealing with surface and storm water should also be determined. The lines and contours of streets influence the lines, sizes, and gradients of the sewers, and *vice versâ*. If a comprehensive plan had been prepared of the whole district some towns, which now have to pump the sewage, might have effected a considerable saving by adopting a gravitation scheme. The general lay-out of a town called for careful judgment in locating the various portions for civic, commercial, industrial, and residential purposes. All factories should be confined to one quarter, and situated so that the prevailing winds blow the smoke away from the residential and commercial areas. Factory workers desired to live near their work, and a number of cottages should be built near the factories, although, with the introduction of cheap tram fares, there was a growing tendency for workers to live somewhat farther away from the factories, in areas where land and cottages were cheaper and the atmosphere purer. The present costly, tedious, and insanitary methods of scavenging by the social wreckage of their large towns should be superseded by the motor-driven sweeping and watering machine with its automatic collecting tank. The house-to-house collection of refuse, with its untidy and unsightly littering of streets, should be superseded by a more sanitary, convenient, and efficient method, viz., a pneumatic system of collection, by which the refuse emptied into a hopper at each house would be drawn through pipes by vacuum pumps, or blown through by air compressors to a refuse destructor, where it would be fed without handling into the furnaces, thus providing part of the power required to work the pumps or compressors, and saving a large amount of money spent on manual and team labour. The nuisance caused by frequent opening of streets for repairing sewers, and gas, water, and other pipes, should be avoided by the provision of subways, to accommodate

Examples of Banker Marks.

all underground pipes and cables. Streets should be made wide enough for future requirements, be direct, and have easy gradients, and, while main arterial roads should be made wider than at present, residential streets may be made narrower so long as the distance between the houses is not less than 50 ft. or 60 ft. Variable construction of road-making should be adopted for the different classes of streets instead of the one general by-law method. Wide radial and ring roads give convenient access from the outskirts to the centre and act as lungs. The streets should be planted with trees as far as possible, so as to relieve the monotonous and depressing appearance of streets. The provision of suitable and sanitary cottages at a reasonable rent was a pressing necessity in both urban and rural districts.

Mr. Mawbey (Leicester) proposed a vote of thanks to the author and emphasised the fact that finance was the most vital element in town planning. There was a limit beyond which they could not ask the landowner to go, and in the provision of wide thoroughfares the local authority must bear part of the expense.

Mr. Munce (Belfast) expressed his view that town planning should be compulsory, and that a penalty should attach to those authorities who neglected to take it up. He did not agree with the author that all the factories should be in one place. In Belfast, for instance, it would not do to put the linen factories down with the foundries or the shipbuilding works. He could not understand the phrase that scavenging was done by the social wreckage. In Belfast the scavengers were paid better wages than ordinary labourers, and they did their work well. He did not agree with the provision of subways, because 95 per cent. of the street openings were for pipes connecting with houses, and they could not have subways to every house.

Mr. Willis (Chiswick) thought that in all town-planning schemes there should be a provision that the elevations of buildings should be submitted to the local authority for their approval. As regarded trees, he advocated smaller trees for small roads and avenues of trees for the larger roads.

Mr. Race (Barrow-in-Furness) remarked that owing to the foresight of the local authority they were spending little money in town planning. They had in many thoroughfares jurisdiction over the elevation of the houses, and the various powers they possessed had been for the benefit of the inhabitants.

Mr. Measham Lee (Karachi) said that such papers were extremely interesting to engineers overseas, who were endeavouring to carry out their work on sanitary lines. In Karachi he had 4 or 5 square miles in which they had to lay down what they called an alignment line, to which any houses rebuilt had to be set back. A few years ago they had to develop some 700 or 800 acres, and, spurred on by the work being done in England, he prepared a plan for the whole of the arterial roads in the district, and at present the scheme was being carried out on the lines of the English Act.

Mr. Stubbs (Blackburn) considered that it was a mistake in a manufacturing town to put the factories in one street and the houses in another. With the development of electric power for factory work there was no reason why houses for the workpeople should not be built in proximity to the factories.

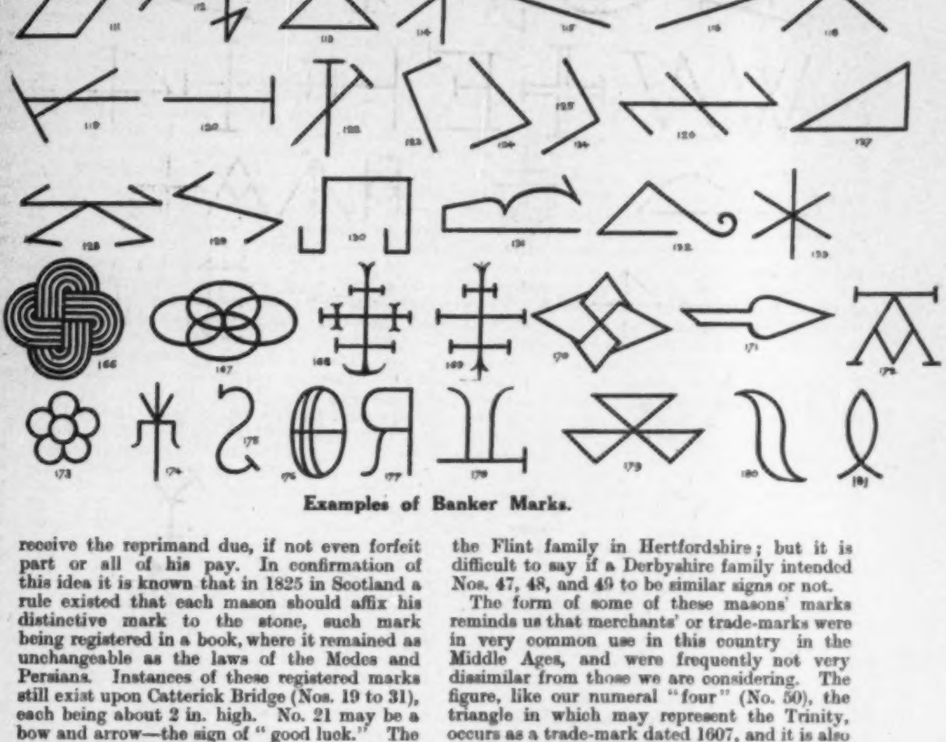
Mr. Price, in reply, agreed that they must meet the landowner in regard to cheapening the cost of development if they were asking something from the landlord. The subways he advocated were for the main business streets and not for residential thoroughfares.

ANCIENT BANKER MARKS.*

"WHEN the London members of the National Association of Master Monumental Masons and Sculptors suggested that I should read them a paper upon masons' marks it was not a subject that had attracted my attention, save perhaps on the occasion of a visit to the foundations of the old round church of St. John's, Clerkenwell, where a considerable number are to be seen (Nos. 1 to 13). I had also observed on the exterior of one or two churches a circular incision containing divisional lines on the plan of a dial, something like No. 81, for which there appears to be no satisfactory explanation. It has consequently been necessary to fall back upon the researches of those who have at different times, and in widely-differing districts and countries, examined and recorded a very great number of these interesting marks. It is, therefore, my first duty to acknowledge indebtedness to the late Mr. Godwin (formerly Editor of the *Builder*), M. Didron, of Paris, Messrs. Rylands, Gorham, and Cecil Davis, and sundry correspondents of *Notes and Queries* and the *Transactions* or *Journals* of various archæological societies.

The practice of artists and craftsmen marking their products is very ancient, perhaps that of the potter being the oldest, closely followed by that of the brickmaker. Bricks of early times bore the signet mark of the Sovereign, while others of the fifteenth century in Saxony were impressed with designs closely resembling merchants' marks, to which further reference will be made. Old books bear printers' trade devices, such as No. 14, in a book dated 1490. In the first place care must be taken to avoid confusion with similar marks bearing another interpretation. For instance, in Egypt there still remain paint marks upon blocks of granite or stone which no doubt indicate the quarries from which they were drawn, every quarry having its own trade-mark; whilst in Arabia and Jerusalem there are found those which are apparently tribal or sectarian, an early instance being No. 15—two spears stuck in the ground

* A paper by Mr. W. E. Gawthorp, F.S.A.Scot., read before the Association of Master Monumental Masons and Sculptors.



Examples of Banker Marks.

...h a circle between indicating a truce. Again, ...re are consecration Crosses on church portals, ...d always upon stone altar-tops, an instance ...which may be seen in the Dutch church in ...stin Friars. A Celtic Cross at Carew, ...mbrokeshire, is wantonly defaced in a ...minent front position by the broad arrow ...No. 16) of the Government Geographical ...rvey, and other monumental landmarks may ...similarly defaced elsewhere.

In all probability the earliest marks were ...habetical—that is to say, based upon letters ...d numerals; these were succeeded by ...thematical figures and finally by symbols ...apparently a religious character. In their ...rmation a general rule was observed that the ...cle should be avoided and that between the ...raight lines there should be at least one angle. ...yond a general statement that early marks ...e of a more simple character than those of ...er date, allowing for some notable exceptions ...does not seem possible to arrive at any ...cision as to the date of the masonry from the ...arks it bears. Instancing the Leicester ...ildings at Kenilworth, the parts known to be ...earlier date differ in their masons' marks ...om those of a later date, but not in such a ...anner as to form a rule to be followed in ...termining their age.

Before examining a selection of these interesting signs in detail it will be well to say that I do not intend to touch upon their relation to Freemasonry, a cult in which I am not initiated. There is a wide divergence of opinion as to whether any symbolic or religious meaning was originally intended. Mr. Godwin was apparently of opinion that the fact that similar marks were found in times and places widely separated tended to prove a symbolic origin, especially as the same marks are still used in Freemasonry. Undoubtedly this similarity may give colour to such a theory, but there does not appear to be any historic evidence to favour the suggestion that bands or guilds of masons travelled from place to place in companies or brotherhoods using similar marks and handing them down to later generations. No doubt when numbers of men were at work together some would find other employment in the same neighbourhood, as, for instance, some of the seventy who were engaged at Stonyhurst in 1594 left their marks also at Mitton Church near by, and the masons who used the shoe-shaped mark at Strasburg were also employed at Rheims.

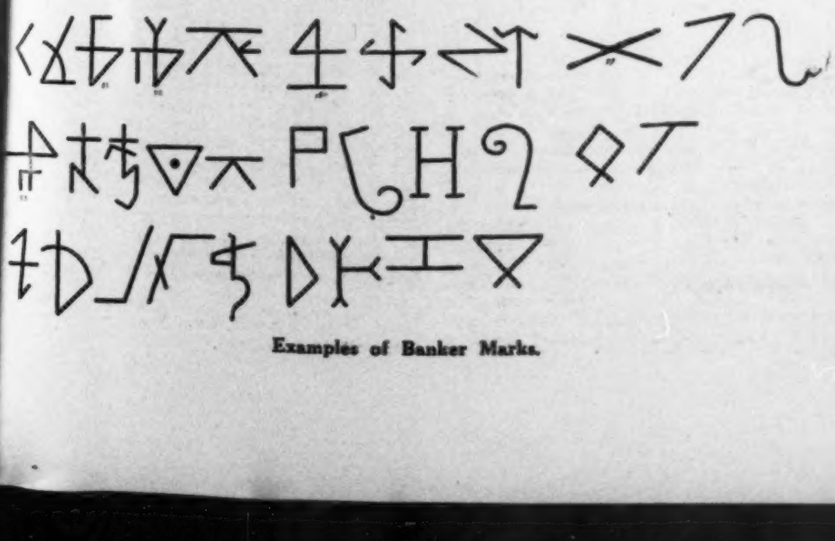
Against the suggestion of religious origin it must be observed that the A or Alpha mark (No. 17)—one of those most widely used—is never found in conjunction with the Omega sign, and also that both it and the Cross (No. 18) are to be found in decorative design prior to the Christian era. Variations of No 17 occur in glass inlays in Egypt of about the fifth century B.C. and on the stones of the Temple of Onias about the second century B.C. Varying forms of the Cross are upon nearly every Egyptian sarcophagus, the tiles of the Temple of Onias, and the stones of Baalbec. The consensus of opinion seems to favour the natural and simple theory that these marks were individually used and were for the purpose of identifying the handwork of each mason. In all probability a system of payment by piecework was adopted, and, according to the marks, the masonry was measured up with a view to remuneration. This method would have the advantage of bringing home to the actual mason any faults, in order that he might receive the reprimand due, if not even forfeit part or all of his pay. In confirmation of this idea it is known that in 1825 in Scotland a rule existed that each mason should affix his distinctive mark to the stone, such mark being registered in a book, where it remained as unchangeable as the laws of the Medes and Persians. Instances of these registered marks still exist upon Catterick Bridge (Nos. 19 to 31), each being about 2 in. high. No. 21 may be a bow and arrow—the sign of "good luck." The Corporation of Free Stone Masons in the Isle of Purbeck also have their marks and may even use them now.

One writer in 1888 states that the masons of his day had their separate and distinctive marks, which were recorded in the foreman's book. A working-mason of the present day tells me that when he was apprenticed to the late Mr. Forsyth he was given the mark No. 32, which he continued to use for many years. Another says that if a certain doorstep is turned up his mark will be found on the under side.

It appears to be generally correct to assume that marks were not passed on from one generation to another, but during last century there were families of masons in different localities whose marks in some cases bear a likeness between those of father and son, while in other cases there is not even an approach to similarity. A selection of illustrations, mostly from the nineteenth century, will make this clear.

A London man and his two sons adopted Nos. 33, 34, and 35—an extremely simple arrangement. Nos. 36, 37, and 38 come from a Bristol family; the second is a development of the first, but the third probably bears no relation to either. Another Bristol father and son have no similarity in their marks, Nos. 39 and 40, and the same remark applies to Nos. 41 and 42, also from Bristol. There is a distinct development in Nos. 43 and 44, employed by a Yorkshire family, as also in Nos. 45 and 46 of the Flint family in Hertfordshire; but it is difficult to say if a Derbyshire family intended Nos. 47, 48, and 49 to be similar signs or not.

The form of some of these masons' marks reminds us that merchants' or trade-marks were in very common use in this country in the Middle Ages, and were frequently not very dissimilar from those we are considering. The figure, like our numeral "four" (No. 50), the triangle in which may represent the Trinity, occurs as a trade-mark dated 1607, and it is also found on the pavement of the Dome of the Rock at Jerusalem, upon the stones of Baalbec, in two churches at Aberdeen, and upon a tombstone at Largs dated 1763. With slight variations it marks the stones of Cologne Cathedral (Nos. 51, 52, and 53) and those of an early English tower at Darenth (No. 54), and probably elsewhere. As a merchants' mark it occurs on a brass to Thomas Lowndes, 1525, at St. Mary Quay, Ipswich (No. 55), and twice upon a font of fifteenth or sixteenth century at Barnard Castle, without the central feature of No. 55. Attached to a deed of the fifth year of Edward I. (1277) there is a seal almost exactly similar to the artist or engraver's mark upon the Brass to Sir John and Lady Creke, 1325 (see No. 56), excepting that the seal is surrounded by the words "Walter le Masun." Had there been a difference of less than the fifty-two years between these two works one might have supposed that this Walter was mason, seal-cutter, and brass engraver, thus forming an interesting connecting-link between these contemporary arts. That portion of it which approximates to the form of the letter N (No. 7) has been noted in Samaria, Poitiers, St. Radégonde, and the Cathedral at Cologne, and in Canterbury Cathedral, where the wall of the north aisle is covered with masons' marks, many of the stones having the two marks, Nos. 7 and 57, in conjunction. As in other places, No. 7 is also found in close connection with other marks; there is suggested the possibility of the sign of an overseer who added his own to those of the masons to indicate his approval. A similar arrangement occurs at Strasburg, Worms, Rheims, and Basle, where a letter or monogram is found with such other marks as a mallet, a trowel, or the sole of a shoe. At Rheims on the lowest stone of the portal arcade there is a monogram and the sole; on the next stone above the monogram and two soles; then three and so on. Another frequent mark is the arrow-head, No. 16, found at Jerusalem, Canterbury Crypt, Furness Abbey, Bosworth, and Lincoln Cathedral, which, of course, must not be confused with the survey mark previously referred to. Another interesting mark is the Fylfot Cross, No. 58, with and without the small circles, now commonly known as a swasticker, a lucky charm, which is found upon a Roman altar at Risingham, together with No. 59. It also recurs at Basle and Alnwick Castle. It was sometimes called Thor's hammer, but is a Sanskrit sign of very ancient use in connection with fire worship, and was adopted later by the early Christians, who cut it in their catacombs, and later still interwoved it in the orphreys of clerical vestments and the decoration of knight's leather



Examples of Banker Marks.

sword belts and the like. A very early origin for these marks has been claimed, although they were not in common use in Europe until perhaps the twelfth century. The earlier ones were rarely hidden away in the joints between the blocks as they were from about 1600 to the eighteenth and nineteenth centuries, when they are again found plentifully cut on the visible faces, especially on walls and bridges. Usually cut near the centre of the face of the block, they do not necessarily appear the right way up or vertical, as probably they were cut in any direction or angle convenient to the man at the banker, not as might have been the case had the stones been already placed in position.

Probably the most ancient instances of the use of masons' marks still in existence are at the Mausoleum of Halicarnassus, 352 B.C.; at Cairo, Nos. 60 and 61; Pompeii, Nos. 62 to 65, the latter being upon nearly every stone of the wall; Carthage, No. 66, very similar to No. 67 at Malmesbury; Jerusalem, No. 18, and a variation of No. 50; Samaria, Nos. 7, 72, 73, and 74; the Mausoleum of Juba, Arabia; the Arabic Mosque of Amru, Cairo; and in the land of Goshen. Others at Jerusalem being but lightly scratched on, such as the arrow-head, and Nos. 68 to 71 of the eleventh and twelfth century, may possibly be Bedouin tribal marks. In England, beside the altars at Risingham, we find early Roman marks on a villa at Acton Scott (Shropshire), as No. 75, and upon Hadrian's Wall (about 200 B.C.), Nos. 76 to 79. The Saxons have left their mark upon an inscription stone at Aldborough, No. 80; and the same as the Roman (Nos. 76 and 77) are frequently repeated on the Round Tower of Brechin (about 1020).

When the Normans settled in England, and under their influence numbers of monastic establishments were built, they, too, left marks, instances of which are found at Market Bosworth, No. 81; at Jedbergh Abbey; and Furness Abbey, Nos. 82 to 98 and No. 11, one of the Norman marks already mentioned in St. John's, Clerkenwell. Here it is worth noting that there is no distinct change in English masons' marks at a time when both tools and styles were undergoing a vast change. In the twelfth century stones were carefully faced with a small axe or chisel worked diagonally on flat surfaces or in directions following the mouldings, but during the succeeding century (thirteenth) the toothed, or claw, tool was introduced, being worked more deeply and vertically. This claw tool was in use in very early ages in South-East Europe, and in Asia, and still remains in Egypt. But meanwhile the simple character of the marks is unchanged. In the Early English period Ely Cathedral is rich in marks, and I am told these are to be found on the woodwork also. There are also examples at Darenth (No. 54) and St. Nicholas, Yarmouth, where one in every four of the stones of the west turrets is marked with a hand, a leg, a ship, or some such design. Furness Abbey again supplies instances during the Decorated and Perpendicular periods, Nos. 99 to 110. Of seventeenth-century marks we have Nos. 111 and 112 on Bray Almshouses, and No. 113 at Brambletye House, and we have already seen examples of the eighteenth and nineteenth centuries (Nos. 19 to 31, 33 to 49).

Let me conclude with a few more illustrations, some groups of which exhibit remarkable simplicity, the forms being confined to straight cuts of the chisel in various combinations, such as at Chetham's College, Nos. 114 to 121 and 156, in addition to Nos. 7 and 77; Bristol, Nos. 122 to 124; Cirencester, Nos. 125 and 126; Gloucester Cathedral, where the Norman aisle north of the nave is thickly covered with such as Nos. 127 to 132; Malmesbury, Nos. 133 and 134, in addition to Nos. 66, 82, and 83; and Cologne Cathedral, Nos. 50 and 135 to 165, No. 156 being also at Chetham's College, and St. Pierre, Poitiers. Those at Cologne are not so deeply cut as in most other places, but their positions seem to follow a more orderly plan than is usual.

In contrast to those of simple form, we have more elaborated designs at New Shoreham Church, Nos. 166 to 169; St. Radégonde, Poitiers, Nos. 170 to 174 and No. 71, without the central circle as at Jerusalem; St. Pierre, Poitiers, Nos. 175 to 181; while in both the churches in Poitiers the N-shape, No. 7, is found in varying form.

During a recent restoration in S. Peter's-ad-Vinculam in the Tower masons' names were discovered written upon a piece of paper placed there at the time of an earlier but modern restoration, and again a fifteenth-century tomb, partly rebuilt and repaired but a short time ago, now contains a card bearing the masons' names and the name and address of their employer, an up-to-date but less romantic and durable method than that adopted by their mediæval predecessors. I close by repeating the hope expressed by those writers to whom I own my indebtedness that every discovery of these interesting relics will be carefully noted and recorded."

The paper was read by Mr. Walter E. Gawthorp, F.S.A.Scot., before the London members of the National Association of Master Monumental Masons and Sculptors, at Anderton's Hotel, May 20.

Mr. Maile (in the chair) introduced the subject with the remark that possibly masons set their mark of workmanship upon their stones in order that posterity might recognise the handiwork of the craftsman.

In the discussion which followed,

Mr. Harris, J.P., gave a most interesting account of the symbolic meaning attaching to some of the marks, especially from the Hebrew and the Freemason point of view.

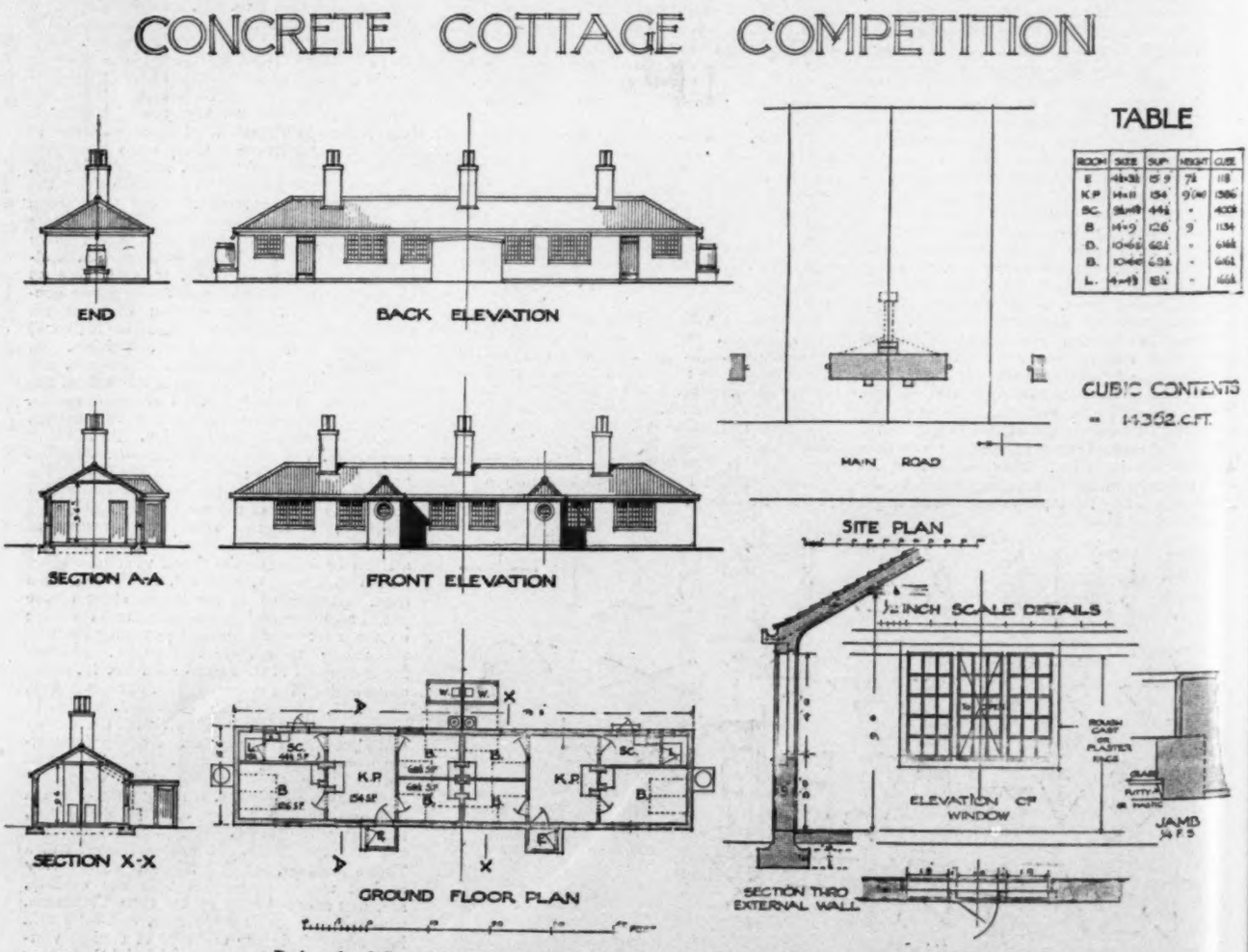
Mr. Oliver Underwood stated that at the present day building blocks were marked on the hidden sides, but the custom was not usual in the monumental trade.

Mr. Jordan suggested a connection between a mason's banker and a carpenter's bench.

Mr. Candy proposed a vote of thanks.

THE CONCRETE COTTAGE COMPETITION.

THE competition inaugurated by *Concrete and Constructional Engineering* has met with an excellent response, no fewer than 249 sets of drawings having been submitted. There is



Design placed Second, by Mr. Charles B. Pearson.

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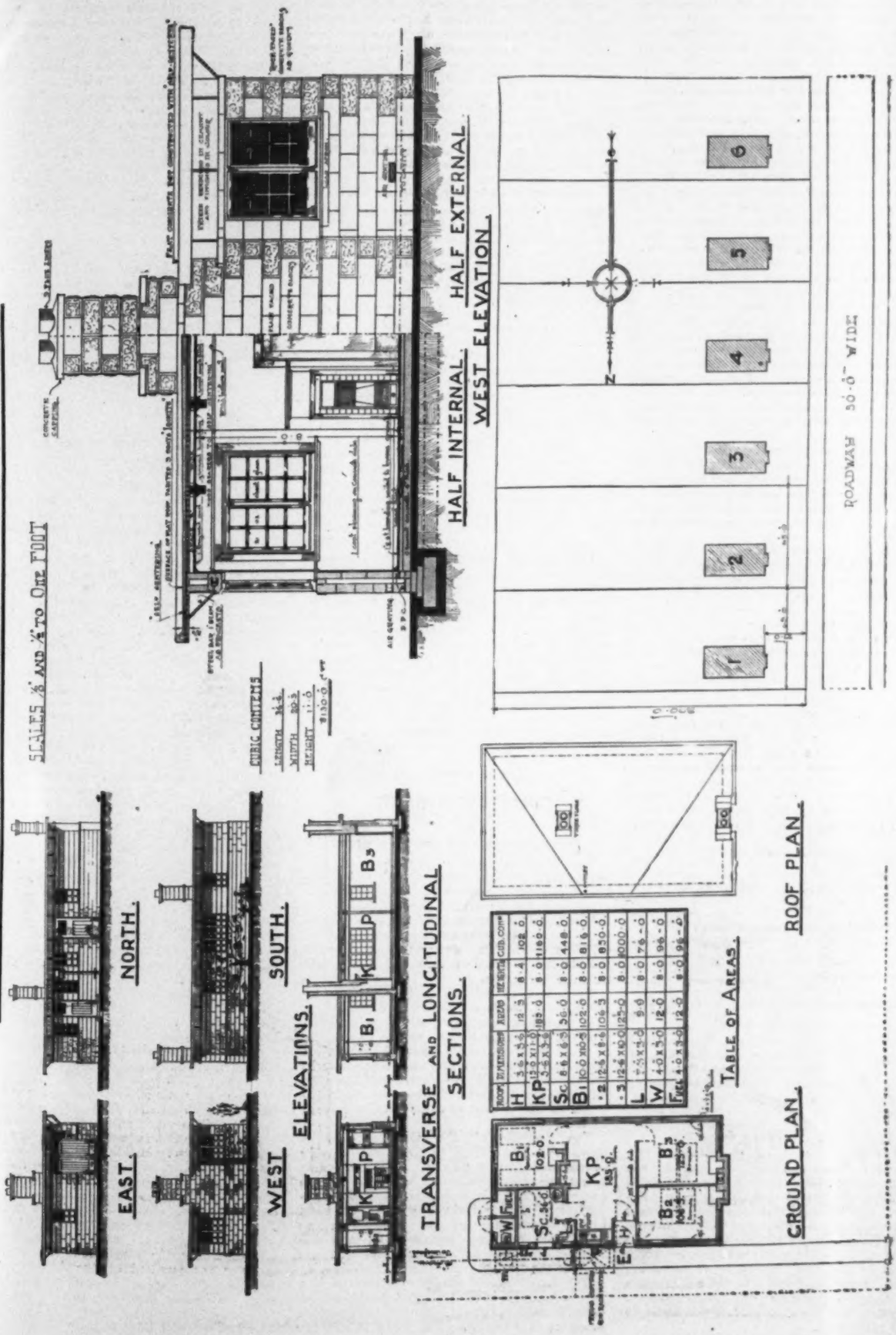
£125 CONCRETE COTTAGE

an unusually sharply-defined difference between the premiated designs and the remainder, few of which strike one as being more suitable for concrete than any other material, and many of them are marked by an attempt at "prettiness" in design, a quality altogether unsuitable to the material they were supposed to be designing for.

The assessors of the competition, Messrs. Max Clarke, Beresford Pite, and Edwin O. Sachs, have, we consider, made an excellent choice, and we entirely endorse their findings. We do not wholly agree with the suggestion that a height of 8 ft. is sufficient for rooms in a country cottage on the ground that doors can be left open and that the occupants of such cottages spend much time out of doors. We are inclined to think that 9 ft., or at the very least 8 ft. 6 in., should be made an irreducible minimum, but that is a point of detail. The cost of the cottages was fixed at £125, exclusive of water supply, drainage, and sanitary fittings, and three bedrooms, living-room, and the necessary offices were to be provided. We illustrate the first premiated design by Mr. Ernest S. Thompson and the design placed second by Mr. Charles B.



Design placed First, by Mr. Ernest S. Thompson. (Copyright of Concrete Publications, Ltd.)

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Pearson, by the courtesy of the Editor of *Concrete*, as we consider both of them are excellent examples of simple, compact, and well-thought-out design.

The first design is for a detached cottage placed end on the site so as to secure a sunny aspect for every room. The disposition of rooms on the plan has been carefully considered and would make a very convenient cottage, and considerable skill has been employed on the elevations, which, though exceedingly simple, would be effective in appearance. The detailing of the flat roof, which forms a projecting shelter all round the building, is distinctly good and suitable, and the end chimney-stack of the two bedroom fireplaces forms a pleasant feature in the design. We would as soon be without the rock-faced concrete quoins at the angles, but this is a small matter of detail, and does not militate against the merits of a very good design.

The design placed second is an able one, and makes a good working plan, but the treatment is not so distinctly one suggesting concrete as in the design we have commented on. It is, however, adapted for building in rows, each house occupying a frontage of 38 ft. The rooms are carried up to the collar of the roof, thus giving a height of 9 ft., but the heads of the windows are only 7 ft. up from the floor, which partially neutralises this advantage.

These two designs are easily first both in treatment and on the merit of their planning.

In the third design, by Mr. Harold G. Holt, a cottage of two floors is given, two bedrooms being placed on the upper story and one smaller one below, the staircase and entrance being placed centrally in each cottage. It is proposed that the concrete should be left rough to show the timber lines when the enclosing shuttering is removed.

The fourth design is by Mr. Leonard Hannaford, and in it the staircases are placed at the outer sides of the block, and three bedrooms are given on the first floor as well as a bath in the scullery. The elevations are a little too formal in character for so small a building.

The fifth design, by Mr. Crosnier, is pleasingly treated with a mansard roof and outside shutters to the windows. The staircases are placed longitudinally, the entrances being at the two ends of the block. One bedroom is placed below and two on the upper floor. It is to be regretted that outside shutters cost money, for they are a great addition to the effect of a simple design.

Two consolation prizes are awarded to Messrs. J. Cocker & T. Hill and Mr. E. W. Stubbs for creditable designs.

We have already alluded to the fact that the great majority of the competitors have treated concrete as they would any other material, and have not produced anything noteworthy. We trust that our contemporary's enterprise will be of help in throwing fresh light on the housing problem, and that some of the cottages designed will be executed.

GENERAL NEWS.

Professional Announcement.

Mr. George P. Allen, Licentiate R.I.B.A., M.S.A., architect and surveyor, of Craven-street, Strand, has removed his offices to 4, Queen Anne's-grove, Bedford Park, London, W., his telephone number being 1561 Chiswick.

A Foreign Honour for an Englishman.

Count Plunkett, H.A.R.I.B.A., has received the distinction of Honorary Academician of the Insigne Artistica Congregazione dei Virtuosi al Pantheon. This famous Roman society of artists is principally concerned with Christian art.

British Fire Prevention Committee.

The annual Report of the British Fire Prevention Committee contains, besides the annual Report, the Committee's Christmas Warnings, Safeguards for School Entertainments, Inflammable Materials for Costumes and Decorations in Places of Entertainment, Celluloid Dangers and the Home Office, Public Control and the Celluloid Industry in North Germany, the new Regulations concerning Cinema Films in Paris, Flannelette Dangers and Portable Chemical Fire Extinguishers. Altogether it is likely to prove an exceedingly useful little book.

Shirley Park, Surrey.

The fine old Georgian house in Shirley Park, between Croydon and West Wickham, formerly the seat of the Earl of Eldon, has been adapted for purposes of a residential hotel in connection with the new Shirley Park golf course, which will be formally opened on July 18 by the Lord Mayor and Sheriffs of the City of London. The locality is famed for its profuse growth of poppies and many rare wild flowers; the park, of 200 acres in extent, is skirted on the north, east, and south sides by the roads from Croydon and Sanderstead; it comprises some beautiful old pleasure-grounds with extensive rhododendron plantations. The golf course has been cleared, in part, from the ancient forest of pines, having a subsoil of white sand over the gravel. The club-house and the adjacent "Dormy House" have been built and equipped under the direction and superintendence of Messrs. Tubbs, Messer, & Poulter, the well-known golf club architects.

Incorporated Church Building Society.

This Society held its usual monthly meeting on Thursday, the 18th ult., at the Society's House, 7, Dean's-yard, Westminster Abbey, S.W., Lieut.-Col. the Hon. G. H. W. Windsor-Clive in the chair. There were also present the Right Hon. Lord Clifden, Sir Edwin Grant-Burls, C.S.I., the Revs. Canon J. Erskine Clarke, the Master of Magdalene College, Cambridge, A. G. Ingram, C. F. Nolloth, D.Litt., G. B. Vaux, Messrs. George Cowell, F.R.C.S., Cardross Grant, J. E. Ollivant, Lewis Wigram, and the Rev. T. T. Norgate, F.R.G.S., F.R.Hist.S., Secretary.

The following grants were paid for works completed:—Aldersbrook, St. Gabriel, Essex, £200; Twickenham, All Saints, Middlesex, £200; Nevin, St. David, Canarvonshire, £80; Ramsey, St. Michael, Essex, £50; and South Kirkby, All Saints, near Wakefield, £30. Grants of money were also made in aid of the following objects, viz., building the new Church of St. Cyprian, Kirkmanshulme, Manchester, £150; and towards enlarging or otherwise improving the accommodation in the churches at Blidworth, St. Mary, Notts, £30; Loveston, St. Leonard, Pembs., £50; and Newbiggin, St. Bartholomew, Northumberland, £80. A grant of £35 was also made from the special Mission Buildings Fund towards erecting a mission church at St. Mark, Teddington, Middlesex. In addition to this the sum of £70 was paid towards the repairs of churches from trust funds held by the Society. Lord Salisbury and Lord Hambledon have become Vice-Presidents of the Society, and vacancies on the General Committee have been filled by the election of Lord Wolmer, M.P., and the Rev. G. B. Vaux.

CORRESPONDENCE.

Technical Education and the Cinema.

SIR,—With reference to the article in your issue of June 26, the proposal to use the cinematograph as an addendum to technical lectures is not new, but is none the less valuable.

It is not clear whether it is suggested to show educational films at the cinema theatre; if so, it is no good. The cinematograph must be used in the technical institutes where scientific instruction is given.

As a visiting lecturer on ferro-concrete at several of the large technical institutes in London, the difficulty of clearly explaining and showing the application of theory to practice in the lecture-room is always present. A liberal use of lantern slides and visits to works under construction partially solves the difficulty, but the time has arrived when the cinematograph should be used in addition to, or instead of, lantern slides.

The non-use of the cinematograph is apparently partly due to the small number of suitable films available, but to a much larger extent it is the lack of apparatus and the cost of providing the necessary fireproof accommodation. The principals of the technical institutes are only too glad to assist in any way their lecturers, but it rests with the "authorities that be" to take the lead and provide the means.

The separation of theory and practice is a very old trouble in the technical world, and has now largely vanished, thanks to modern methods of education; but there is still the danger of cramming young men with the theory of a subject, with the result that when they are called upon to apply their knowledge to practical work they are found wanting. Any step forward to remove this difficulty is real advance.

R. GRAHAM KEEVILL, A.M.I.M.E.

The R.I.B.A. Meeting of June 29.

SIR,—The first duty of the new Council should be to test the legality of the President's action in issuing notices for this meeting to only some of the members. If in your leader on page 2 last week you had quoted the whole of By-law 39 the point you make would have been much clearer. The by-law reads: "No notices or other documents other than those necessary for the usual conduct of the business of the Institute shall be issued to the various classes of members and Licentiates, save those directed to be so issued by the Charter or by-laws or by resolution of the Council, except that in case of emergency the President shall have power to issue any notice he may think fit, provided that he report his action at the next meeting of the Council." It will be seen that this by-law refers to the issue of notices to various *classes* of members and permits the President to send whatever notice he may think fit, but not necessarily solely to whom he thinks fit. If his action comes strictly within the letter of the law the by-law must be altered, for otherwise it would admit of grave abuse of the Institute funds. If, on the other hand, his action was illegal, counsel's opinion should be sought as to whether such action invalidates the meeting and its resolutions.

In spite of the doubt as to its legality, the meeting showed very clearly one thing—that the allied societies are very anxious for increased representation on the Council. The plea for increased representation of the Associate class was evidently lost sight of, for no one attempted to argue against it. If the question has to be reopened it may be as well to have some practical scheme of representation on the Council to discuss. The following suggestions are put forward with the view of ascertaining other ideas:—

1. That the representation of the allied societies in the United Kingdom be as proposed except that the representatives may be either Fellows or Associates.

2. That the dual representation of R.I.B.A. members attached to allied societies in the United Kingdom be abolished. Such members shall only have a vote for their allied society's candidates.

3. That the ordinary members of the Council number one Fellow for every *fifty* Fellows not being members of an allied society in the United Kingdom, and the Associate members of the Council number one Associate for every *hundred* Associates not being members of an allied society in the United Kingdom. (As the numbers stand in the *Kalendar*, this will give eleven Fellows and twelve Associates, thus reducing the proposed ordinary members of the Council by four and increasing the Associate members by two.)

4. That the Chairmen of the Standing Committees be nominated by the Council from among its own members.

5. That the other members of the Council (ex officio, etc.) remain as proposed, *i.e.*:—

One President (Fellow).
Four Vice-Presidents (Fellows).
One Hon. Secretary (Fellow).
One Chairman of Board of Architectural Education (Fellow).
Two Past-Presidents (Fellows).
One representative of the Architectural Association (Fellow or Associate).

These suggestions, without being revolutionary, modify some of the proposals of the late Council to which objection has been made. The size of the Council will be reduced by about seven members from that proposed, principally by cutting out the Chairmen of the Standing Committees as *extra* members of the Council. Neglecting for the moment the members elected by the allied societies, but counting the ex-officio members, etc., one Fellow of the Council will represent twenty-eight of the Fellowship class and one Associate member one hundred of the Associate class. The Associate class require representatives from their own class as much as the allied societies want theirs from the provinces. The Fellows will have at least a majority of

seven, but more often nine, in a Council of forty-three—say a one-sixth majority. It is not within the range of probabilities that amongst the representatives of the allied societies the Associates should number more than twice the number of Fellows, and it is only thus that the majority of Fellows might be extinguished. It is true that by reducing the size of the Council the representatives of the allied societies, which are not reduced in number, will have a greater weight. This will compensate them for the loss of the dual voting and also show the trust that is reposed in them.

W. J. DAVIES, A.R.I.B.A.

The Proposed R.I.B.A. Charter.

SIR,—The Registration battle is now in full swing, and, although there may be a momentary lull, the fighting bids fair to be more determined and severe within the walls of the Institute itself than any opposition that is likely to be brought against it from without.

Whether the Institute will call a truce remains to be seen, for it is not an isolated outbreak that they have to deal with now, but a general conflagration.

However the Licentiates may be classed in the Institute one thing is clear—they are not indifferent, as has been suggested, to these Charter proposals.

When one remembers that the Indian Mutiny was caused by the conviction that the cartridges were greased with bullocks' fat it may be a gentle reminder to those members of the Institute who wish to wound the susceptibilities of their fellows of the slippery path they are pursuing.

It is all very well after receiving the numerical support of the Licentiates when the fighting is over for the Institute to think that they can take all the plums and battle honours and reduce the former in rank, but we have a parallel in the second Balkan War. There we saw the great Roumanian army, represented by that large body of unattached architects who are watching events and ready to swoop down to the support of their Licentiate friends and to throw their weight into the scale if need be, and anyone who has been to the provinces of late knows only too well how strong this sympathy is.

When we consider that in 1912 there were 2,119 Licentiates as against 1,578 Associates and 836 Fellows, everyone of the former being at least thirty years of age, and having ten years' experience (and no one will dare to suggest that they can get too much in architecture), it is clear not a boy soldier is to be found within their ranks. And what a spectacle—young recruits being pressed through their squad drills to browbeat those veterans who have probably been through more fighting than many of them will ever see!

I think it was a great mistake to bring dogs, bones, and tails into the Charter debates; the top dog, we know, is usually the aggressive dog. Moreover, if our friends will insist on dividing up the skeleton and claiming to be the backbone, including the coccyx, the Licentiates, topping the list as they do in numbers and being the head, can claim the skull, the remaining members being represented by the lower limbs, the foundation and support of the structure.

The Licentiates being, according to the latest figures, 2,089, are undoubtedly the strongest architectural body (not divided into classes) in this or possibly any other country. What would happen then to the proposed Charter if they were to withdraw their support?

The Institute can hardly expect to claim them one moment to gain their ends only to disown them the next and to settle their fate over their heads without any vote or in any way consulting their wishes or obtaining their views.

The Licentiates have genuine grievances; one of them is their ridiculous affix, which they insist on being officially blotted out.

It has been a dead letter from the first, and the Institute knows that it cannot be enforced. True, as a sort of dying gasp, they did appeal to the Press to support them in trying to stuff it down the throats of the Licentiates, the former having reduced it to L.R.I.B.A., excepting one journal, which, with a view to compromise, made it Lic.R.I.B.A.

We have heard that the Licentiates are rapidly dying out, but I have not noticed any increase in the death rate. Possibly the wish may have been father to the thought. Anyway, they have not been encouraged by another section to apply for promotion, and thus die, I suppose, an unnatural death in that manner. I think that members of the Institute ought to be able to settle their domestic troubles without taking extreme measures outside. For instance, could not a plebiscite be taken, or, as when differences arise between them in their work, they call in a third party? Is there not an Hon. Fellow whose decision would carry great weight with all ranks, who could smooth matters between various classes? Anyway, for the moment the fall in has been sounded, and it is the duty of every Licentiate to answer the call and stand to arms and await events.

H. C. PULLIN.

LAW REPORTS.

COURT OF APPEAL.

(Before Lords Justices BUCKLEY, KENNEDY, and PHILLIMORE.)

The Building Operations at Sefton Park: Holland & Hannen and Cubitts, Ltd. *v.* Lord Decies.

THEIR Lordships recently delivered judgment in this case upon the appeal of the plaintiffs, the well-known builders, from a judgment of Mr. Justice Bailhache, the action having reference to contract work executed by the plaintiffs for extensive alterations at Lord Decies' country seat at Sefton Park, involving practically the rebuilding of the drawing-room, the dining-room, and the reconstruction of the hall and a bedroom, and other alterations.

The facts of the case were fully stated in last week's issue of the *Builder*.

In giving judgment, Lord Justice Buckley said it was not necessary to deliver a judgment of any length. Mr. Justice Bailhache had gone into all the items thoroughly, exhaustively, and at great length. After he had done that he said he did not intend to give any details of how his figures were made up or how he arrived at them. The learned Judge said he did not say the figures were absolutely accurate, but he had disregarded all trivial matters. Though the Judge had not given all the small items, he said he was satisfied he had arrived at a proper total. That Court did not sit there to investigate whether an item should be £10 or £5, but to decide questions of principle and substance. There was no question of law involved in this case. The whole question was one of figures, total, and quantum, such work as he had said as was done by an Official Referee. He did not think it the duty of that Court to sit there for five days to consider such a matter. He was satisfied Mr. Justice Bailhache was right. He had decided on a question of quantum and total, and it was not the business of that Court to review his judgment. The appeal would be dismissed, with costs.

The other Lords Justices concurred.

KING'S BENCH DIVISION.

(Before Mr. Justice SHEARMAN.)

West-End Light and Air Litigation: Hocker *v.* Shields.

THIS case was heard last week, it being an action brought by the plaintiff, Mrs. Louisa Hocker, of No. 16, Park-lane, W., for a mandatory injunction to restrain the defendant, Dr. Douglas A. Shields, of No. 41, Park-lane, from building at No. 17, Park-lane (of which the defendant was the tenant), so as to obstruct the light and air coming to the plaintiff's house. Plaintiff also alternatively claimed damages.

Mr. Charles, K.C., and Mr. Greenwood Mears (instructed by Mr. G. E. Hodgkinson) appeared for the plaintiff: and Mr. Pollock, K.C., and Mr. Douglas Hogg (instructed by Messrs. Rutter, Veitch, & Bond) for the defendant.

Mr. Charles said Mrs. Hocker held her house under a lease, and it was divided from No. 17 by Brick-street, which measured 17 ft. 6 in. at its widest part and 15 ft. 3 in. at its narrowest part. The part of the defendant's house facing No. 16 was for a long time hidden by tarpaulin, and the plaintiff never suspected that two complete stories were being added to it. But she discovered it in the end, and on May 13 last obtained an interim injunction against him. But in spite of that the work continued, as it was said that it would not injure the windows at the rear. So the plaintiff on May 14 got the injunction amended, and yet it did not stop the building, the defendant being told by his architect that the work could be finished without interfering with the light and air of No. 16. No. 17 now overtopped No. 16 by 17 ft. 9 in. Correspondence ensued, and the defendant's answer was that the plaintiff's rooms were darkened by the scaffolding, and that he was going to have the side of his house painted white, which would be much better for the plaintiff. The windows affected were those of the study, pantry, bathroom, and bedrooms—fourteen in all. Mrs. Hocker's son had been obliged to give up the use of the study because it was so dark; in fact, the sky could not be seen at all except by bending down, and in some of the other rooms electric light had to be used except when it was very sunny. It was admitted that the plaintiff was entitled to the light and air, and the defence set up was that it had not been interfered with.

Mr. Pollock said no question of air arose on the pleadings.

Mrs. Hocker, who stated that she was the proprietress of several London hotels, including the Hotel Washington and the St. Petersburg Hotel, said she had only met the defendant once, and she thought he was a very nice man. The work of building had been going on for months, but the tarpaulin concealed everything, being put up, she alleged, for that purpose.

Mr. Pollock said that was absolutely untrue. The work was done under contract in the usual way.

Mr. Howard Chatfeild Clarke, President of the Surveyors' Institution, said he estimated that the damage done to the plaintiff's house by the additions was equal to a sum of £60 a year for the ten years that the lease had to run, or, deducting interest, about £500.

Mr. William Arthur Thomas, architect and surveyor, of Finsbury-square, E.C., who advised the plaintiff as to the effect of the additions on her premises, said the amount of light and air admitted was materially reduced, and during November and December artificial light would have to be burned most of the time. The effect on the rental would be a reduction of about £75 a year if the house came into the market. On a dull day the rooms would be dark and on a still day rather close and smelly, the latter because of the fact that there were a garage and mews in the street.

Mr. William A. Paul, F.S.I., member of the firm of Messrs. Pilditch, said he had been in business for twenty-five years, and had had much experience of questions of light and air. He surveyed the plaintiff's premises last Friday, and again on Tuesday. The rooms on the first three floors suffered from a substantial diminution of light. He agreed that the disadvantages from which the house now suffered amounted in money to a reduction of £500 on the rent over the next ten years.

Mr. Havelock Joseph Collins, of the firm of Messrs. Collins & Collins, surveyors and estate agents, South Audley-street, said that but for the additions to the defendant's house that were complained of the house was worth £675, if not £700 a year.

Private witnesses gave evidence of the condition of the rooms in the house since the additions to the defendant's house.

Mr. Percy J. Waldram, F.S.I., of Buckingham-street, W.C., gave expert evidence on the measurement of the light admitted to the plaintiff's house. He gave particulars of the usual variations of light, and said that, taking a common-sense view as a London surveyor, the light in the rooms was distinctly below a reasonable standard.

Mr. John B. Thorp, architect and model-maker, said he constructed the model for the plaintiff's house now before the Court from drawings made by Mr. Lewis.

Mr. Pollock, in opening the defence, said the question was whether, from a common-sense point of view, a nuisance had been committed. Any alteration with the defendant's house might cut off some of the light. What had been done was to straighten what was previously the line of the mansard roof. Every person would prefer to look out on a sloping roof with windows than on a blank wall; but that had nothing to do with the light, which was the question before the Court. As a matter of fact the sort of light that was needed for a house like the plaintiff's was from the east and west and not from the north, of which a point had been made, and he submitted that the bay-window in the Brick-street wall was to catch as much of that light as possible. As to the painting of the defendant's wall, Counsel said that was done to make his house attractive as a nursing home, and it was not done to try to deprive the plaintiff of the use of a point for her case. Having started to cement and paint the wall, the defendant was obliged to keep it cemented and painted. No material additions had been made to the house since the injunction, and they had taken down 1 ft. 3 in. to try to meet the plaintiff. What building had been done was in no sense within the ambit of the injunction.

Mr. George White, head-coachman to Mr. Alfred Rothschild, who lives in Brick-street, said since the additions were made the light in his rooms was not worse than it had been before.

Mr. George Thrale Jell, A.R.I.B.A., of Carlton House, Regent-street, W., who prepared

the plans for the additions, said there was no truth in the suggestion that tarpaulins were put up to conceal the work. It was to cover the roof to protect the inside.

Mr. Howard Martin, a Past-President of the Surveyors' Institution, and who has had many years' experience of London property, said the light that reached the bedrooms on the upper floors was ample for bedrooms of that class in London, and there was no injury to the rental value of the premises. He could not see how the suggested depreciation could be made, as in the case of some of the rooms it was more than their rental value.

Mr. Stephen Chalmers, an expert on questions of illumination, and Mr. Max Clarke, F.R.I.B.A., gave evidence on the amount of light that entered the plaintiff's rooms, stating that, in their opinion, it was sufficient for all ordinary purposes, and was not interfered with by the additions to the defendant's premises.

His Lordship, before giving judgment, said that during the arguments by Counsel he intimated that it was not a case for an injunction, and he asked Mr. Pollock whether, if the plaintiff succeeded, he would prefer to pay damages?

Mr. Pollock said the defendant would rather prefer that.

His Lordship said he was of the opinion that the additions to the defendant's house had caused substantial interference with the light and air that was admitted to the plaintiff's house, and with its comfortable occupation, and the only question he had to decide was the amount of damages to be awarded. It appeared to him that the true rental value of the house was something like £500 a year. The difference made to it by the addition to the defendant's house he assessed at 10 per cent., or £50 of that rental, and the damage must therefore be estimated at a rental loss of £50 a year for the ten years that the plaintiff's lease had to run. The plaintiff must also have the costs of the action, including the costs of the witnesses, and of preparing the model.

Mr. Charles suggested that it would be well to file the plans, so that there should be no mistake, if the question should arise at any time in the future, as to how far the building had gone.

His Lordship said he was assessing the damages for the obstruction by the works already completed as shown on the defendant's plans. The judgment would be for damages on the basis of £50 a year rental loss, capitalised on the 6 per cent. table, about £500.

KING'S BENCH DIVISION.

(Before Mr. Justice BANKES.)

Action by Architects for Fees: Scott Willey & Webster *v.* Wilkinson & Lambert.

THIS case, heard last week, was an action brought by the plaintiffs, a firm of architects and surveyors, practising at 161a, Strand, W.C., to recover from the defendants, Mr. H. R. Wilkinson, of Hotham-road, Putney, and Mr. H. W. Lambert, of Holland-road, W., £203 18s., for professional services rendered in connection with a scheme for building a picture palace at Fulham. Mr. Lambert denied that the plaintiffs acted for him, and alleged that Mr. Wilkinson had no authority to request them to do so. Mr. Wilkinson denied that he asked plaintiffs to incur expenses, and that if they did it was conditional upon their raising capital for the scheme, and he further alleged that the plans were negligently prepared.

Mr. Rowland Thomas appeared for the plaintiffs, Mr. Mulligan for Mr. Wilkinson, and Mr. Tratton for Mr. Lambert.

Mr. Thomas said Mr. Lambert, having obtained the lease of some land at Fulham, applied to Mr. Webster for financial assistance in December, 1912, but did not obtain it. On March 18, 1913, however, he had raised some capital, and, calling at the plaintiffs' offices, gave definite instructions to them to proceed with the plans. He left a rough sketch of the building required, and on June 2 he called at the offices and took the plans away. The connection between the two defendants was shown, said Counsel, by a diary kept by Mr. Lambert. From this it appeared that they were seeing each other daily and discussing the picture theatre scheme. There was some difficulty in getting builders to do the work, and the scheme fell through.

Messrs. Scott Willey & F. A. M. Webster gave evidence, stating that they did not agree to accept their fees only after the theatre was opened, or that they would find the capital for the building. The plans were prepared on the instructions Mr. Willey received from Mr. Wilkinson, and the fees charged were on the ordinary R.I.B.A. scale.

Mr. H. R. Wilkinson, one of the defendants, gave evidence that the plaintiffs promised to arrange for the capital for the scheme, and on that understanding they got their instructions to prepare the plans, and agreed to wait until the theatre was open before they would ask for their fees.

The other defendant, Mr. Harry William Lambert, said he never understood that he was liable for the plaintiffs' fees, because he believed that Mr. Wilkinson had arranged to obtain the necessary capital before the architects were engaged.

His Lordship, giving judgment, said there was clear evidence that the defendants were co-adventurers in the scheme. Mr. Wilkinson got the plaintiffs to act as architects, and they acted, not on the terms he had pleaded, but in the ordinary way. He found that both defendants were equally liable, and gave judgment for the plaintiffs for the amount claimed, with costs.

What Constitute Public Roads.

INTERESTING questions as to public and private roads were raised at Brentford Police-court recently, when the Twickenham Urban District Council applied for sanction of the apportionment of making up Cole Park-road at Twickenham under the Private Street Works Act, 1892. There was one objector, Mr. R. M. Rowe, for whom Mr. Naldrett appeared, Mr. Mackenzie being for the Council.

The latter said the road was 1,081 yds. long and the cost would be £4,468, the apportionment being on the basis of 13s. 9d. per foot frontage. There were originally ninety objectors, all but one having withdrawn. In 1897 Mr. Fitzroy Cole proposed to lay out his estate for building, and submitted plans, which were passed. At the time there was an ancient footpath across the estate, and by award of Quarter Sessions this was diverted. The District Council was desirous of getting an entrance to a public recreation ground, and entered into an agreement with Mr. Cole, by which the ancient footway was to be continued by a path 8 ft. wide. The Council agreed to maintain it, to build a bridge over a stream, and so form the desired entrance. They were further to pay Mr. Cole £75 when the roads were taken over by the Council. Subsequently Mr. Cole laid out, bit by bit, as land was built upon, Cole Park-road, which followed these two paths and incorporated them, they forming the footway on one side of the 40-ft. wide road. So far as that portion formed by the old diverted path, the Council would be liable, and the apportionment would have to be reduced by the amount of £188.

Mr. F. W. Pearce, the Surveyor, in giving evidence in support, said the road was out of repair, and the frontagers would get a good thoroughfare. The road was marked "Private" at each end.

Mr. Naldrett argued that the agreement with Mr. Cole for the construction of the footpath to the recreation ground was made under the terms of the Local Government Act, and therefore the path became a highway repairable by the inhabitants at large. This pathway continued the ancient one, and Cole Park-road, when laid out, extended and widened them, and under the Herne Bay case he contended that the whole of the road became of the nature of the footways repairable out of the general district rates. If it were held to be otherwise then, as the strip of path that the Council admitted they were liable to repair, ran between the remainder of the road and the frontagers on the south side, the latter must be said to abut on an old highway, and therefore could not be brought into the apportionment. He characterised the apportionment as a "try on" by the Council to get frontagers to pay what the whole parish should pay. He contended the whole apportionment should be quashed.

Mr. Mackenzie said the Council contracted as local authority not as highway authority, to take care of the path to the recreation grounds. It was not done for the benefit of the general public, but for residents in one portion of the district. The agreement provided that Mr. Cole should lay out the path, the Council should build the bridge and keep the path in repair, and pay £75 for the use of the path. They contracted to keep it up.

The Chairman: Isn't that a liability as a local authority?

Mr. Mackenzie replied in the negative. It was done for the protection of the users of the path, who wished to go to the Council's recreation ground. By the agreemnt with Mr. Cole, when he laid out the road he was to keep it in order until the Council took it over, and to pay the apportionment if the frontagers failed to do so. Although an old footpath ran between frontagers and the rest of the road, they were not relieved of their responsibility to pay.

The Bench uphold the apportionment subject to frontagers along the line of ancient diverted footpath being credited with the cost of making up the path. No order was made as to costs.

On the application of Mr. Naldrett, the Bench agreed to state a case on the questions raised.

Surveyor's Fees: Interesting Discussion.

AT Guildhall, on the 3rd inst., Mr. Surrey, one of the District Surveyors for the City, sued Mr. H. T. Roads, a builder, of 30, Richmond-road, Twickenham, for fees amounting to £4 4s. The summons was in respect of the certification of plans for a proposed new warehouse to be erected at Albion-buildings, Aldersgate.

Mr. Surrey received a letter dated June 14, 1913, from Messrs. Sage & Idle, surveyors, Old Queen-street, Westminster, respecting the submission of plans of a building "our client, Mr. Roads," was about to build in Aldersgate-street. Mr. Idle called upon him with Mr. Roads, the usual formalities were gone through, and Mr. Surrey first sent in his account to Messrs. Sage & Idle. Their answer was: "We have seen our client and will send cheque when his contract is signed." Mr. Surrey never received a cheque, and in consequence sent another account to the defendant, Mr. Roads, who repudiated liability.

Mr. Roads declared that the matter really had nothing to do with him. He was merely the proposed builder of a warehouse, but the negotiations fell through.

Mr. Savill (the Clerk): Were Messrs. Sage & Idle the architects of the property? Who employed them?

Mr. Roads: I don't know. I didn't.

Mr. H. W. Idle went into the box and said that after the preliminary negotiations with reference to this building the matter fell through.

Mr. Savill: For whom were you acting?

Mr. Idle: Mr. Sage, who was my partner at the time, took the matter up himself as a speculation.

Alderman Sir John Bell (the magistrate): Was Mr. Sage acting for anybody else?

Witness; No, only for himself. Mr. Roads was the builder who was to be employed if the matter went through.

Sir John said he did not know how on earth the defendant was to be made liable, inasmuch as the building stage was never reached.

Mr. J. Whittan (appearing for Mr. Surrey): The Act provides that when any building work is proposed to be done the builder shall submit plans to the District Surveyor. Mr. Roads was the builder who was going to be employed.

Mr. Savill: Yes, but your recovery is limited to "the builder erecting the building," or the owner or occupier. The builder has not been employed.

Mr. Whittan: If you take that interpretation of the Act, a surveyor would never recover his fees in a case like this. Plans have to be submitted before a building is put up.

Mr. Savill: Yes, because he (the surveyor) is entitled to know who is putting it up.

Sir John pointed out that Mr. Roads was merely consulted on a matter that fell through. How could he be described as the "builder," seeing no building work was done?

Mr. Whittan suggested that the word "builder" in the Act was intended to include an intending builder.

Mr. Savill: The Act says, "the builder employed."

Sir John: No doubt Mr. Surrey was misled by the reference to "our client" in Messrs. Sage & Idle's letter.

Mr. Surrey: And by Mr. Roads, who said he was going to be the builder.

Sir John: Under certain conditions.

Mr. Whittan said if such a strict interpretation were adopted the surveyors would be compelled to claim against the actual owners, who might be ignorant of any building proposals.

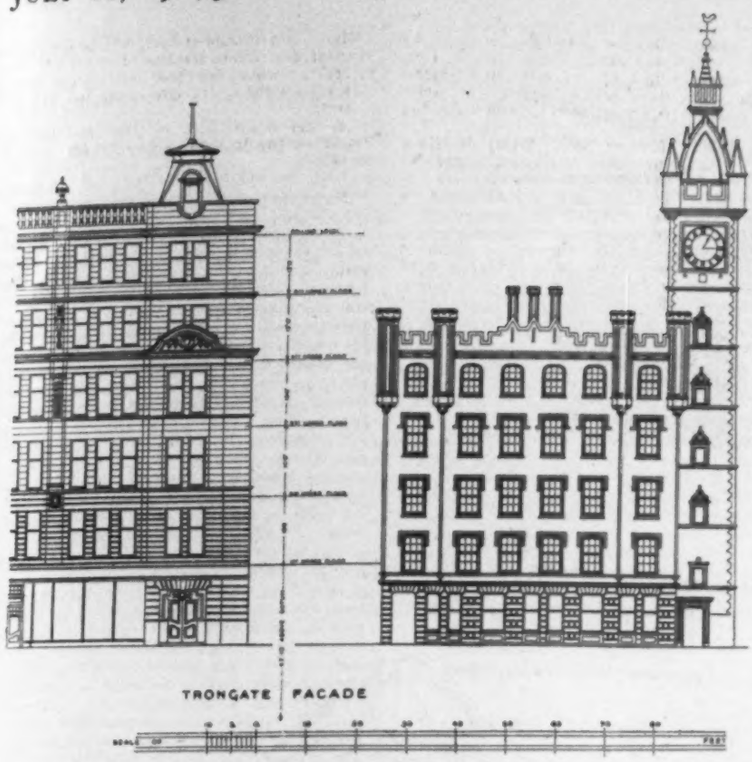
Sir J. Bell: Mr. Roads was never employed as the builder in this matter. All he did was to consent to do certain work under specified conditions. Mr. Surrey was deceived by the letter we have heard read, but I don't see how you can bring the defendant into it. I must dismiss the summons.

Mr. Roads asked for costs, and Mr. Whittan expressed the hope that none would be awarded, as Mr. Surrey had been entirely deceived over this matter.

Sir John: No costs.

THE LATE MR. CREED'S ESTATE.

The late Mr. Richard Creed, F.R.I.B.A., of No. 5, Verulam-buildings, Gray's Inn, and Little Bardfield Hall, Essex, for more than twenty-five years Architect Inspector to the Board of Agriculture, who died on May 8, aged sixty-seven years, has left estate to the gross value of £14,041.



THE CORPORATION OF THE CITY OF GLASGOW
CITY IMPROVEMENT DEPARTMENT
PROPOSED NEW BUILDINGS GLASGOW CROSS

COMPETITION NEWS.

It must be understood that the following paragraphs are printed as news, and not as advertisements; and that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that may occur.

The list of current Competitions is printed on page 56.

Proposed New School, Sunderland-Road, Gateshead.

Members and Licentiates of the R.I.B.A. are advised that the conditions of this competition are not in accordance with the Institute regulations for architectural competitions, and the Competitions Committee are in correspondence with the promoters with a view to getting them amended.

Walton Hall Estate, Liverpool.

The Liverpool Corporation, unlike other municipal bodies, wish us to deposit the sum of one guinea before the conditions, etc., for laying out the above estate can be sent to us, and consequently we are not able to give particulars of this competition.

Cottage Hospital Extension, Willesden.

Willesden Cottage Hospital Council, at a meeting last week, considered a report from the Finance and Building Enlargement Committee, which recommended the extension of the hospital to accommodate fifty or sixty beds. In explaining the scheme, the Chairman (Mr. G. J. Furness) said that the present proposal was to erect a building with fifty or sixty beds, with staff accommodation, etc., at a cost of about £12,000. Competitive drawings were to be invited for the new hospital, and two prizes would be offered by the Council. Provision was also to be made for a resident medical officer, and accommodation might be provided for an additional number of local doctors if necessary. There would be a casualty and out-patients' department. In the discussion which ensued Mr. Robson stated that the prizes for plans would not be awarded unless suitable drawings were submitted. The report was unanimously adopted, and it was decided to raise £100 to provide funds in connection with advertising for competitive drawings for the new hospital. Premiums of £50 and £25 respectively were to be offered for the first and second designs sent in for the building, subject to certain conditions.

New School, Hendon.

At the meeting of the Hendon Education Committee last week the Sites Sub-Committee reported that after a careful examination of the Hale-grove School plans they had agreed to recommend that they be placed in the following order:—First, plans marked No. 2; second, plans marked No. 3; third, plans marked No. 4. The sealed envelope containing the names of the architects were then opened, when it was found that the names were as follows:—First, Mr. Arthur H. Fitzgerald, M.S.A., 12, Shipley-road, Tynemouth; second, Mr. Herbert E. Gulliver, "Arden," Streetly, Sutton Coldfield; third, Mr. Frank E. Taylor, 10, Cobham-road, Kingston-on-Thames.

Public Hall, Stockton.

At the meeting of the Stockton Town Council last week the Borough Fund Committee recommended the Council to purchase property in Yarm-lane and in West-row, to provide the necessary increased office accommodation and afford facilities for the erection of a large public hall without in any way disturbing the existing hall. In opposing the recommendation Mr. Downdey moved that in order to ascertain whether the site of the recently-acquired property adjacent to the Town Hall was suitable to provide adequate office accommodation for the Town Clerk's, Surveyor's, Accountant's, and Sanitary Departments, and also in what way the present Borough Hall can be improved, competitive plans be advertised for, the first three selected sets to receive prizes, subject to their becoming the property of the Council. After a short discussion the amendment was carried by twenty votes to sixteen.

Bolton-on-Dearne Housing Scheme.

Bolton Urban Council is about to launch out upon a second housing scheme, consisting of 310 houses or more at a probable cost of about £70,000. A large plot of land, around which is land so laid out that crowding will not be possible, has been secured, and the Council decided to put the architectural designs out to competition. This was done, and Mr. Chas Hadfield, of Sheffield, was appointed as assessor and made the following awards, which have since been confirmed by the Council:—First prize, with premium of £50 and appointment, Mr. G. F. Pennington, architect, of Messrs. Garside & Pennington, Pontefract and Castleford; second prize (£50), Messrs. Matley & Mills, Manchester; third prize (£25), Messrs. Franklin & Deacon, Luton. Bolton has one of the most successful housing schemes already in operation, and the present proposed scheme will include three classes of house, viz., six-roomed house with bathroom, etc., four-roomed house, and small class house. A number of houses with shops are also being erected.

Glasgow City Improvements Department: Abstract of Conditions of Competition.

The Corporation of the City of Glasgow propose to take down the existing buildings at the north-west corner of Trongate and High-street, with the exception of the Tolbooth Steeple, to set back the frontage line, and to erect business premises on the site thus obtained, together with the existing open spaces to the north and west.

In conjunction with these works an offer has been received by the Corporation to give to the City a market cross.

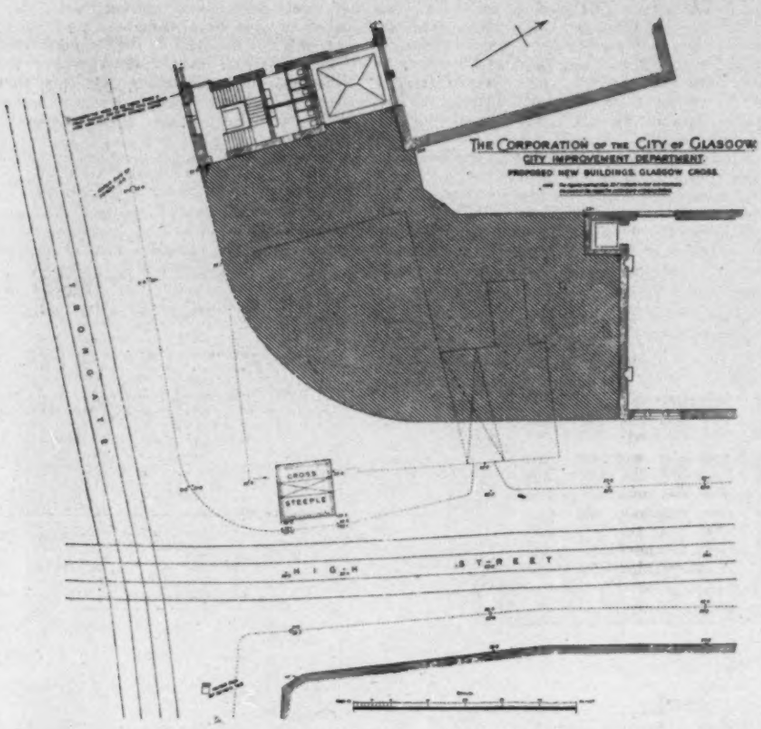
The Corporation invite competitive plans for the works involved, namely:—(1) The business premises; (2) the retention of the Tolbooth Steeple in its present position, with such work as may be required to make good after the removal of the building with which its lower stories are at present incorporated; and (3) the provision of a market cross.

The President of the Glasgow Institute of Architects at the date of appointment (Mr. A. N. Paterson, A.R.S.A.) will act, with Mr. M'Donald, the City Engineer, in advising the Corporation in the selection of the design.

The authors of the first, second, and third designs will receive premiums of £50, £30, and £25 respectively, subject always to what is contained in the next condition.

The author of the design placed first by the assessors will be employed as architect to carry out the work, at a commission of 5 per cent. upon the cost of the buildings, including fittings, exclusive of measurer's and clerk of work's fees, unless, in the opinion of the Corporation, with the advice of the assessors, it cannot be carried out within 10 per cent. of the amount stated, or unless such employment is barred, in the opinion of the Corporation, by some other insuperable obstacle. Such employment will not necessarily cover the erection of the market cross, which, being a private gift, may, in the option of the donor, form a separate commission. In the event of the author of any premiated design being employed as architect no premium will be paid to him. If two or more designs by the same author are placed among the first three, the author of these designs will be entitled to receive only one premium, the next in order being premiated. In the event of the non-employment, from one or other of the above-named causes, of the author of the design placed first the author of the one which stands second in the judgment of the assessors will be substituted, subject to the same conditions, and so on. The working drawings of the architect employed will remain his property, but on completion of the building he shall supply, free of charge, to the Corporation, a complete and accurate set of plans of the buildings, showing drains, etc., as finished.

The plan of the site provided herewith shows the area within which the buildings must be confined, with the exception of the steeple and market cross. The frontage of the business premises need not rigidly adhere to the outline



shown, but no part of the building must project beyond it. The situation of the proposed market cross is left to the option of competitors. Elevations of the end bays of contiguous buildings and of the steeple are also furnished herewith.

The proposed buildings are intended for business purposes, and must be suitable for letting in flats or as a whole, and must consist of at least six floors and basement. All floors must be in line with those of the adjoining buildings recently erected to the west of the site. A staircase, with an enclosed passenger lift, and one set of lavatories in each of the upper floors, has already been provided in the adjoining buildings, as shown on the plan provided herewith, and these must be incorporated in any scheme submitted. An additional set of lavatories must be provided on each floor in the new building, also a goods lift, with access from each floor, and with delivery to court, together with such additional stairs as competitors may think necessary. The roofs and all the floors of the buildings must be constructed of fire-resisting materials.

While the purpose for which the buildings is intended should regulate the character of the elevation, the importance of the site, historically and otherwise, should be given some consideration, as also the general grouping of the design with the Tolbooth Steeple.

The drawings required are as follows, and (with the exception of the block plan) are to be to a scale of $\frac{1}{8}$ in. to the foot:—

Plans of basement, shop floor, and one upper floor.

One cross-section or sectional elevation.

Two elevations, to Trongate and High-street respectively; one of these to show the steeple and market cross.

One perspective (view to be taken from point indicated on block plan).

Block plan, to scale of $\frac{1}{16}$ in. to the foot.

The elevations must show the adjoining buildings, to the extent of two bays of the front to Trongate and one to High-street.

Designs must be delivered to the Town Clerk on or before September 18, 1914.

ILLUSTRATIONS.

Some Sculpture from the Paris Salon, 1914.

WE give a selection from the sculpture at the Salon in this year's exhibition.

Offices of the Government of New Zealand.

OUR illustration shows the new offices to be built on the site of Nos. 413-416, Strand, W.C., for the Government of New Zealand.

The building is to be of Portland stone and the roof covered with Westmorland green slates. The entrance doors and ground-floor window-frames will be of bronze.

We illustrate the ground and first floor plans. There is a central main entrance from the Strand leading into a large exhibition hall, where the various products of New Zealand will be exhibited.

The first floor will contain the High Commissioner's room, library, and reading-room. On the second floor will be situated the office of the Secretary to the Department and the Chief Clerk. The remaining floors will be used by the staff of the various departments.

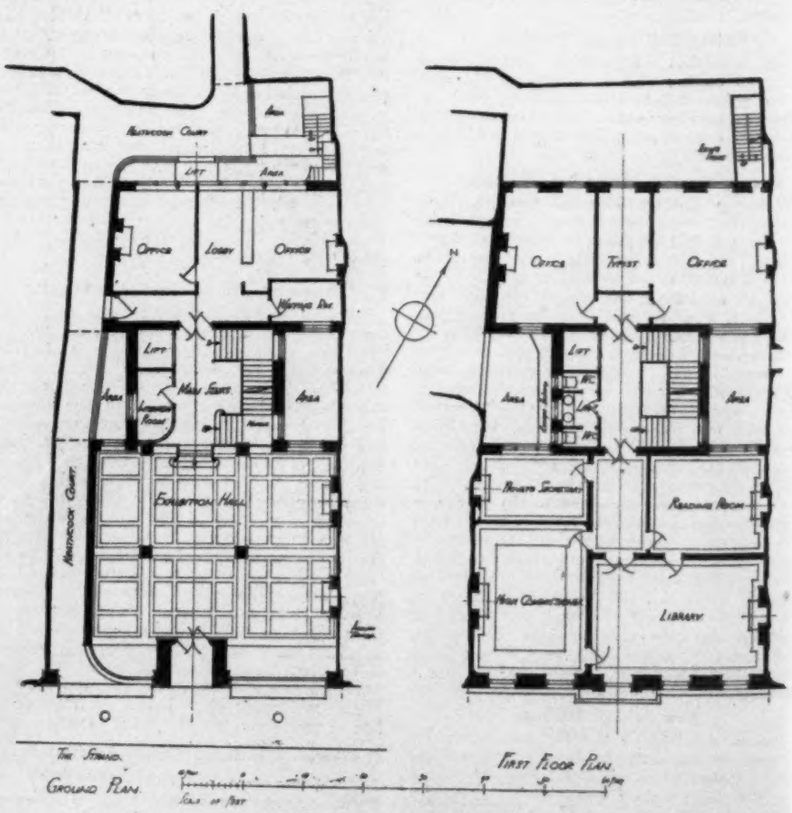
The architects for the building are Messrs. Crickmay & Sons, 13, Victoria-street, S.W.

Ilkeston Secondary School.

THIS building is, in the words of the description accompanying the album presented to His Majesty the King, "an attempt to express a modern school in modern terms." It is an entire departure both in plan and treatment from the commonly accepted ideas which have hitherto governed school planning. So far as the planning is concerned, it will be observed that the building is a quadrangle with a cloister all round it on the inside, and in the centre of the garth is the assembly hall, octagonal on plan. Around the quadrangle are ten class-rooms, accommodating from twenty to thirty pupils each, with a total accommodation for 252 scholars. In addition to this, there are also cookery-room, art-room, manual-room, and science laboratory, together with cloakrooms, lavatories, and sanitary conveniences. There are also a room for the headmaster, staff rooms for the male and female teachers, and above the main entrance a library, which is also used by the senior assistant mistress.

It will be noted that all the teaching-rooms have two opposite walls exposed to the air. By putting windows in these walls it will be seen at once that through ventilation can be obtained, and, so far as our present knowledge takes us, through ventilation is the most economical, the simplest, and the best means of providing fresh air. The windows are provided with protected hoppers at the bottom and swing lights above. The hoppers are so arranged that the air is bound to travel upward and diffuse before reaching the room, thus avoiding unpleasant draughts. To ensure the requisite amount of warmth low-pressure hot-water heating is installed, and each room is provided with not less than 30 sq. ft. of heating surface to every 1,000 cubic ft. of contents. It will also be noted that each classroom has one door, and the special rooms two, opening directly into the fresh air. The advantage of this arrangement in very hot weather needs no description, and at all times ensures the air at the bottom of the room being effectually removed.

The treatment of the classrooms is quite



New Zealand Offices.

Messrs. Crickmay & Sons, Architects.

simple in character. The walls have wooden framing, the panels within being of plaster. The floors are of wood block on concrete, and each classroom is provided with a cupboard in the thickness of the wall. Wall blackboards are also provided, and in each classroom is a fireplace. The cookery-room tables and furniture are, intentionally, quite plain. Although it is impossible to bring a cookery centre to be the same as the kitchen of a private house, every attempt has been made to take care that the contrast shall be as little as possible.

The present art-room calls for little note except to state that, should the school work develop, it is possible that this may become a second science laboratory. On the north of the site a space has been left for possible developments, and should a housewifery centre, caretaker's house, gymnasium, and another art-room be required they can be provided there. In the woodwork shop the walls have been left unplastered, and have been merely whitewashed, so as to make this as much like a workshop as possible. In the science laboratory everything has been kept to the simplest lines. Along one of the long walls a bench has been provided for advanced students, and this is the only bench provided with cupboards. Everything else has been left open underneath, and the amount of sinks and plumbing has been reduced to a minimum. Preparation and store rooms are provided to all the special rooms.

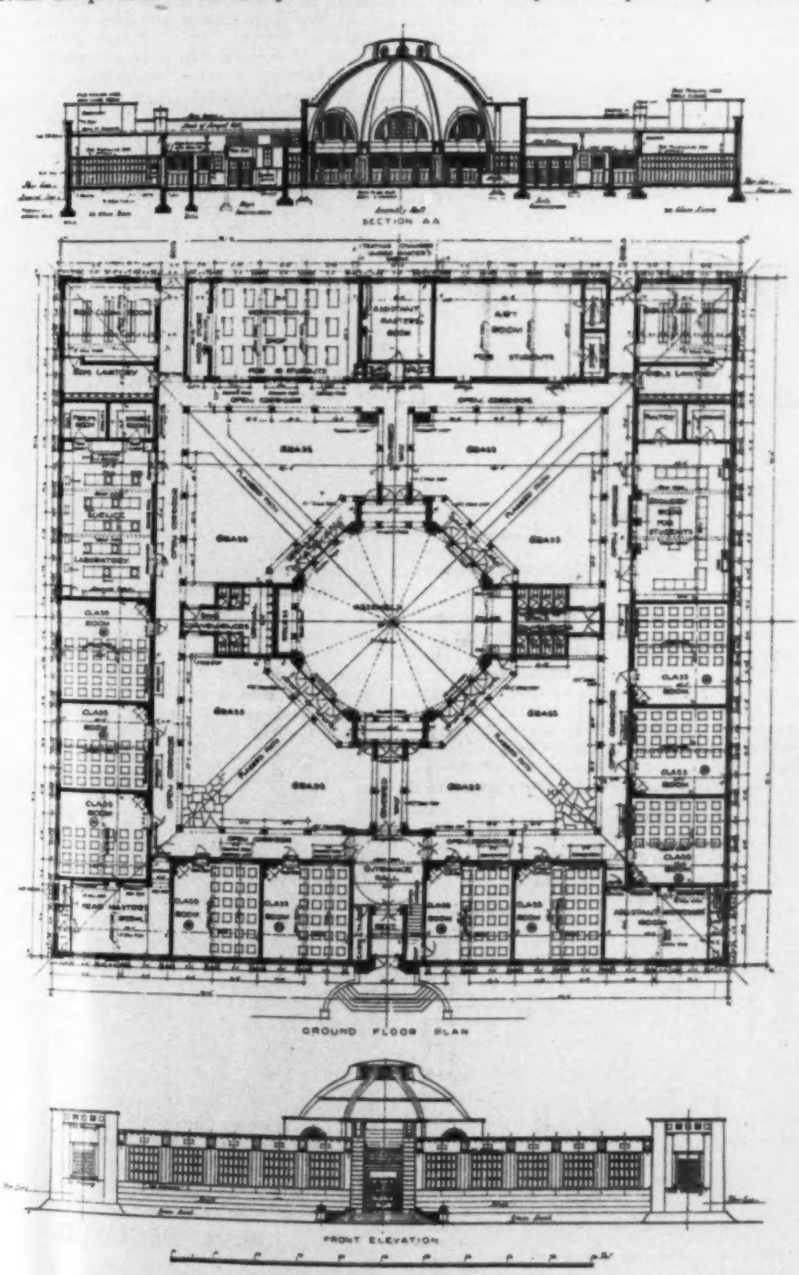
The headmaster's and staff rooms have been provided with plain wood panelling, and an attempt has been made to give these a domestic appearance. The assembly hall is provided with doors all round, so that in wet weather it will be possible to take physical drill in the hall and at the same time be practically in the fresh air.

So far as the architectural treatment is concerned the building follows no style. It will be seen that there is an absence of mouldings and ornament. All round the building there is a deep plinth of red and brindled bricks, and above this is plain cement rough-cast, whitened. The roofs of the building are flat and are of reinforced concrete with asphalt covering. The cloister is of wood and covered with felt and asphalt. The assembly hall is finished with a reinforced-concrete dome. Inside the cloister the buildings are finished with narrow common bricks. While the building has been kept perfectly plain and free from mouldings, carving, and the like an attempt has been made to introduce the colour spirit which governed the work of our forefathers in the Middle Ages. To many the colours will appear striking and unusual, but we must remember that our buildings were not always as sombre as they are at the present day. The Commonwealth was the finishing touch which reduced nearly everything in this country to drab and white. The present is professedly an attempt to reintroduce colour and get back some of the spirit of that time when our land was known as "Merrie England." The colour scheme in the hall owes a great deal to the fact that the Chairman of the Governors (Mr. F. P. Sudbury) has been good enough to provide the hall with no less than seven stained-glass windows.

The building stands at the top of a double terrace, and below these is a playing field. Around the site and round the main building is a plentiful supply of trees and shrubs. Playgrounds for boys and girls are also provided, and an asphalt tennis court is provided in addition to grass ones.

The general contractor for the work has been Mr. A. Earnshaw, of Ilkeston, and the subcontractors are as follows:—

Joinery, Messrs. Donnelly & Son, Kimberley.
Electric lighting, Ilkeston Motor and Electrical Engineering Company, Ilkeston.
Heating, Messrs. Jerram & Co., Ltd., Derby.
Reinforced concrete dome and flats, Messrs. Evans Bros., Alfreton.
Asphalt flats, Val de Travers, Ltd., Birmingham.
Asphalting, Mr. A. Earnshaw, Ilkeston.
Locks and ironmongery, Messrs. W. & R. Leggott, Ltd., Bradford.
Wood-block floors, Messrs. Hollis Bros., Hull.
Painting, Mr. J. Godber, Ilkeston.
Stained glass and decoration, Messrs. Gascoyne & Son, Nottingham.
Sanitary fittings, Messrs. Morrison, Ingram, & Co., Ltd., Manchester.
Hat and coat hooks, Mr. J. Gibbons, Wolverhampton.
Laying-out of grounds, Messrs. W. Barron & Son, Ltd., Borrowash.
Iron railings, Messrs. Taylor, Whiting, & Taylor, Derby.
Floor polishing, Ronuk, Ltd., Manchester.
Floor tiling, Durus Tile Company, Birmingham.
Leaded lights and iron casements, Mr. Andrew Stoddart, Nottingham.



Ilkeston Secondary School.
Mr. G. Widdows, A.R.I.B.A., Architect.

St. Albans, Golder's Green.

THE church is to be built at the angle of North End-road and West Heath Drive to accommodate 750. The future Morning Chapel forms an octagonal building entered from one of the porches of the church.

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the Council was held on Tuesday in the County Hall, Spring-gardens, S.W., Viscount Peel, Chairman, presiding.

Loans.—The Finance Committee recommend that loans be made to public bodies as follows:—£10,100 to the Lewisham Borough Council for contribution towards cost of acquisition of Crystal Palace; £1,350 to the Greenwich Union Gardens for works at infirmary.

Abbey Mills Pumping-Station.—The Main Drainage Committee recommend that tenders be invited by public advertisement for the construction at Abbey Mills pumping-station of an annexe to the Worthington Engine-house to contain the hydraulic machinery.

Theatres, etc.—The Theatres and Music-Halls Committee have approved of the following proposals:—Bow Common-lane (cinematograph hall)—arrangements in connection with electric fan to be installed; Devonshire Hall, Hackney—various alterations; Earl's Court Exhibition (Anglo-Spanish Exhibition)—proposal to utilise portions of Queen's Palace as a lounge and for concerts, electrical arrangements in connection with "Zip Targets" and "Electric House"; Great White City (Anglo-American Exhibition)—arrangement of Indian reservation; High-street, Eltham (Eltham Cinema)—alterations to the ventilating system; 120, Jamaica-road, Bermondsey—motor generator and switchboard in motor-room; Metropolitan Theatre of Varieties, Edgware-road—alterations in operating enclosure and provision of a new rewinding room; Olympia, Hammersmith—seating arrangements for a boxing contest on July 16; Royal Agricultural Hall—arrangements for Rubber Exhibition; 9-15, Stroud Green-road—arrangement of seating and gas plant.

BUSINESS PREMISES, NEWGATE-STREET, E.C.

Shops and offices are in course of erection in Newgate-street, E.C., from the design of Mr. Malcolm W. Matts, Licentiate R.I.B.A., Staple House, Chancery-lane, W.C. The builders are Messrs. Willmott & Sons, Hornsey and Hitchin, Herts.

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MEETINGS.

TUESDAY, JULY 14, TO WEDNESDAY, JULY 22.

Royal Archæological Institute of Great Britain and Ireland.—The summer meeting to be held at Derby.

FRIDAY, JULY 17.

The Architectural Association.—Annual prize-giving and exhibition of work by students in the Architectural School of Architecture. 2.30 p.m.

NOTES ON THE HISTORY OF SCENIC DECORATION:

INTRODUCTORY.

IT is surely a remarkable fact that notwithstanding the fascination, and, need it be added, the importance of the subject, a complete history of the art of stage decoration is still awaited. For, although some vigorous spade-work has been done in certain directions, a comprehensive study of the art throughout its development in Europe has yet to be written. Histories of the theatre, it is true, exist in any number, but in these for the most part scenic decoration takes an unimportant place, if indeed it be dealt with at all; yet it is the development of this art which, for good or evil, has shaped our modern theatre.

Of the antiquity of the art we have reputable evidence, but at what precise period in the history of the theatre scenic decoration was first applied to the stage, and in what manner, it would be more than hazardous to venture an opinion, for of all, among the many sore points in classical archæology, surely none has been more hotly debated.

Professor de Morgan, in those clever papers of his on the history of perspective, telling of the origin of the science, says wittily "that to be perfectly respectable a science must trace up to some disputed passage of a classical author"; and a respectability of equal lineage can certainly be claimed for scenic painting, for is it not in the selfsame passage of Vitruvius that we find the first mention of these two subjects? Perspective and scene painting, indeed, are used by Vitruvius as being virtually synonymous terms, and sheltering behind that author as our authority we can acclaim Agatharcus as the first scene painter recorded in history. For Vitruvius tells us that it was he who first executed a scene painting in perspective for the Greek theatre on the occasion of the performance of one of the plays of Æschylus. Vitruvius further says that Agatharcus wrote a treatise on perspective which inspired Democritus and Anaxagoras to explore the subject, and to "show how it was possible in scenic paintings to give sure images of objects otherwise hard to fix correctly, so that when such objects were figured on an upright plane at right angles to the line of sight, some should appear to recede and others to come forwards."

Tantalisingly inadequate as are the descriptions of Vitruvius to convey to us an accurate picture of the scenic equipment of the stage of the classic theatre, they can by no means be left out in any consideration of our subject, for great as was the influence of his writings over the development of architecture during the Renaissance in Italy, his influence was no less powerful in shaping the art of scene painting in the theatre of that period. Indeed, we find that in the first book published on the subject of scenic decoration, Serlio, its author, cites Vitruvius as the supreme authority on the art. Even his division of the scenes of the classic drama into three types—the tragic, the comic, and the satyric—is absolutely followed, while his descriptions of the component parts of these different scenes are carefully construed by Serlio in modern terms.

The history of modern scene painting may be said to date from the rediscovery by Brunelleschi of the long-lost science of perspective, for the development of this science which marks the opening of the modern era of painting, paved the way for the application of the scenic picture to the uses of the stage.

The eagerness with which the Italian masters took up the study of the new science was unbounded, and some of this enthusiasm is reflected in the early treatises published on the subject. Serlio, for instance, emphatically asserts that a knowledge of perspective is the very basis of an artist's training, and in the preface to his "Second Book of Architecture" gives it as his opinion that "Perspective Art is very necessary for a workeman; and no Perspective workeman can make any worke without Architecture, nor the Architecture without Perspective." More than that, to illustrate the power of the science, he tells us that his master, Peruzzi, who "was also a Paynter, and so well scene in Perspective Art, that he, seeking to place certaine Pillars and other Anticke works perspectively, tooke such a pleasure in the proportions and measures thereof that he also became an Architector."*

The Stage of the Early Greek Theatre.

Whether this be so or no, the reference to Peruzzi here is of extraordinary interest in the present connection, for the earliest known drawings showing the application of the principles of perspective to scenic decoration are from the hand of that master, who so far as present historical evidence goes, may be considered to be the originator of this idea.

It is also very interesting to observe that Serlio, who is our first authority on the arrangement of the stage of the Renaissance theatre, follows Vitruvius in the presentment of his subject, for it is in his treatise on perspective that he deals with scene painting, considering the art seemingly to be the natural application of that science from the point of view of architectural practice.

The consideration of scenic decoration in a present-day treatise on architecture would occasion some surprise, more perhaps if a scenic *projet* were set as the subject of design in the Final Examination of the R.I.B.A., but throughout the Renaissance period the theatre architect's work did not end with the erection of the building; the stage, too, was under his care. For not only was the architect stage carpenter in the widest sense of the term, and deviser of lighting effects, but in most instances the designs for both scenery and costume came from his hand.

Whether the architect ever will regain his lost position in the theatre seems speculative in the extreme, but is it not to the advent of a superman of this type that Mr. Gordon Craig looks for the salvation of the stage of to-day?

W. G. K.

(To be continued.)

* Robert Peake's translation.

ARCHITECTURE AND THE STAGE.

IT is greatly to be regretted that the Scala Theatre is not more centrally situated, for it stands alone among the playhouses of London for really first-rate design. The treatment of the dress circle, with its stairways to the floor of the house, the design of the balcony fronts and the ceiling show how much is missed in ordinary theatre design. Seeing a play produced in such a setting gives an impression of the value of architectural surroundings to the drama as may be seen now in "La Dame aux Camélias."

Miss Lydia Yavorska acts the part of Marguerite Gautier with great force and expression. She is temperamentally gifted for such a part, and her acting is full of feeling. She is, however, poorly supported. Mr. Ambrose Flower, who takes the part of Armand Duval, is unequal, though in the last act his acting left little to be desired in pathos and feeling. Mr. Fred Lewis gave a good representation of Saint Gaudens, and some of the minor parts were effectively filled, but excepting for Madame Yavorska's own performance the opportunities of this most dramatic play were missed. The scenery was very simple and at times distinctly Futurist in type; that of Act V. (Marguerite's bedroom) is most artistic in its setting.

At the Haymarket a new play in four acts, entitled "Driven," by E. Temple Thurston, is given. It is a pleasing piece of comedy somewhat wanting in force, the *motif* of the play being the unwisdom of concealing a doctor's diagnosis from the party most concerned, especially when the lady in question ascertains all by listening at a keyhole. Mr. C. Aubrey Smith takes the part of J. N. Staffurth, M.P., while Mr. Owen Nares makes a great deal of the part of Captain Furness. Mr. E. Lyall Swete acts the part of a pompous doctor to the life, while Miss Alexandra Carlisle as Diana Staffurth is very charming and natural, and the difficult part of Barbara Cullen is well filled by Miss Ruth Mackay. The scenes of the piece are two in number, a drawing-room of no special note, and Captain Furness's Room at St. James's, a well-thought-out and executed interior of a free Renaissance character.

FIFTY YEARS AGO.

The Grave of the Late Sir Charles Barry, Architect.

A MEMORIAL brass has recently been placed in the nave of Westminster Abbey by the family of the late Sir Charles Barry, over the position of his coffin, and close to the grave of the late Robert Stephenson. It has been made by Messrs. Hardman, and consists of a large floriated cross let into a slab of black marble, about 12 ft. by 5 ft., with an inscription round the outside of the slab and at the foot of the cross. Two tablets are introduced into the design, one giving the elevation of the Victoria Tower, and the other a plan of the New Palace at Westminster.

The inscription at the foot of the cross is as follows:—"Sacred to the memory of Sir Charles Barry, Knight, R.A., F.R.S., etc., architect of the New Palace at Westminster, and other buildings, who died 12th of May, A.D. 1860, aged 64 years, and lies buried beneath this brass."

The following text is also inscribed round the outside of the marble slab:—"Whatsoever ye do, do it heartily, as to the Lord, and not unto men; for so ye serve the Lord Christ." Col. iii. 23, 24.

[*** We give the above extract from the *Builder* of July 9, 1864.—ED.]

BOOK RECEIVED.

THE ARCHITECTURE OF HUMANISM. By Geoffrey Scott. (London: Constable & Co., Ltd. 7s. 6d. net.)

THE BUILDER, JULY 10, 1914.

THE SURPRISED NYMPH, BY M. EMILE BOISSEAU.

STATUE OF M. FABRE, BY M. F. M. CHARPENTIER.

THE NEST, BY M. H. MOREAU.

SOME SCULPTURE FROM THE SALON OF 1914.

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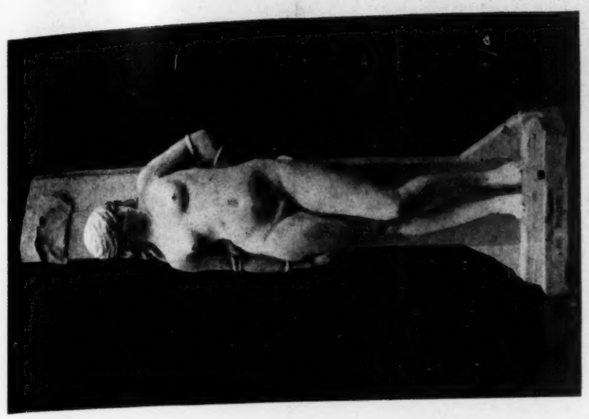
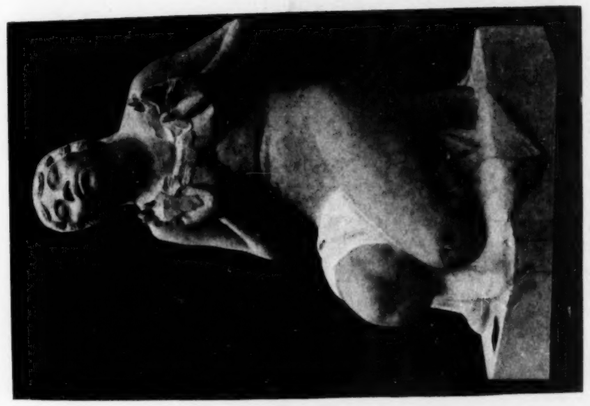


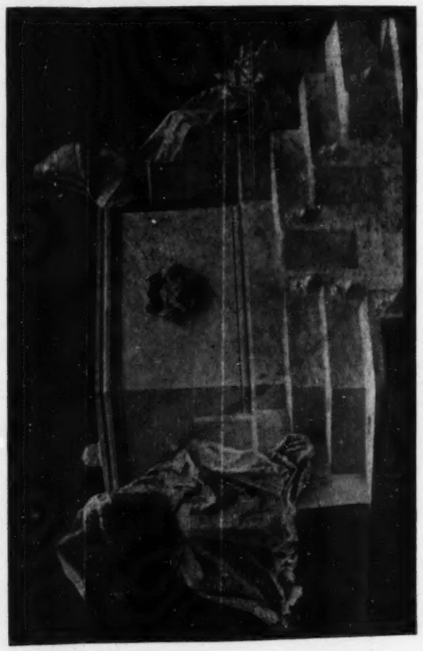
AT THE PILLORY, BY M. L. B. BERNSTAMM.



THE FETISH, BY M. E. HUÉS.

THE DANCER BY M. F. OUILLON-CARRÈRE.

THE FOUNTAIN OF DAMES OF YORE, BY M. C. ALAPHILIPPE.



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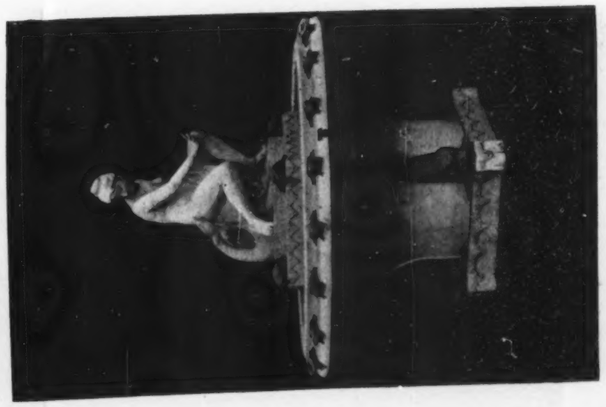
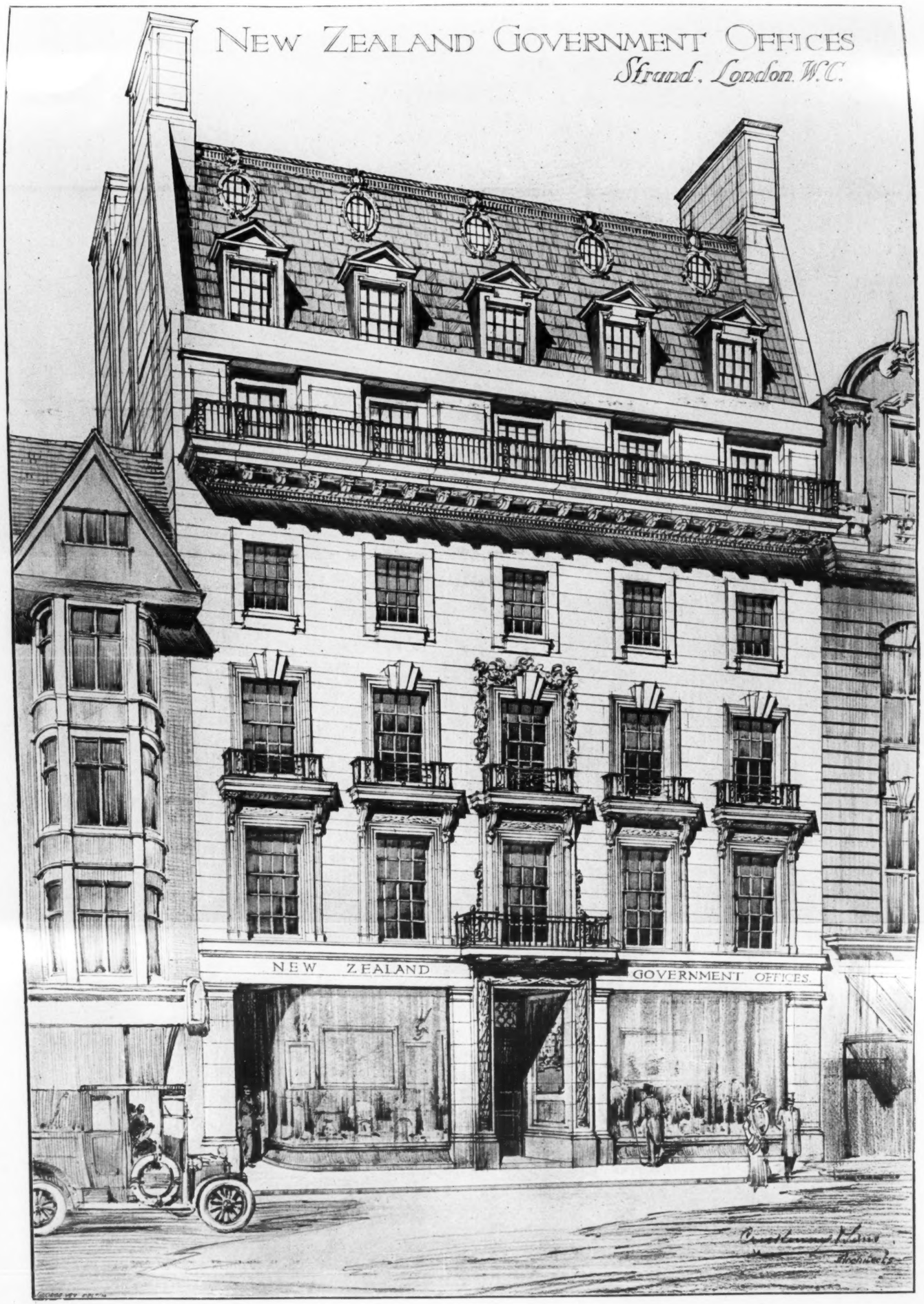


THE SURPRISED NYMPH, BY M. EMILE BOISSEAU.

SOME SCULPTURE FROM THE SALON OF 1914.

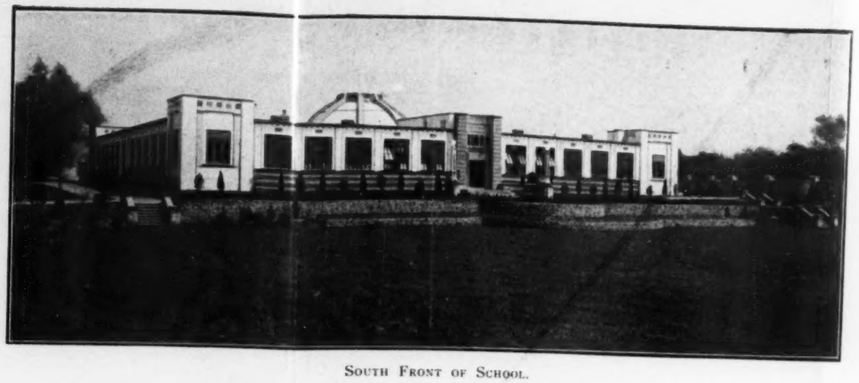
NEW ZEALAND GOVERNMENT OFFICES

Strand, London, W.C.



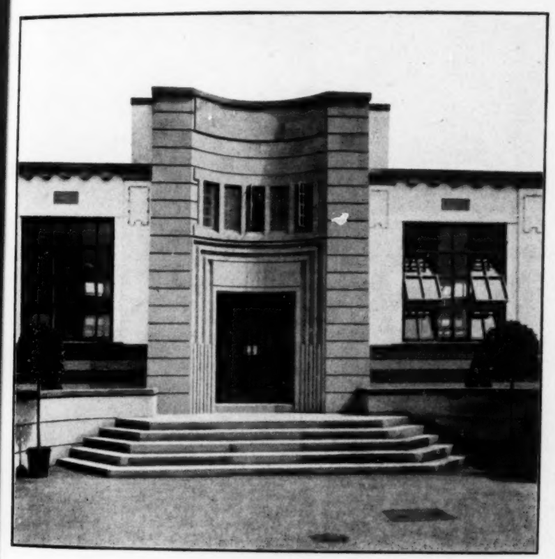
NEW ZEALAND GOVERNMENT OFFICES.—Messrs. Crickmay & Sons, Architects.

COOKERY-ROOM.

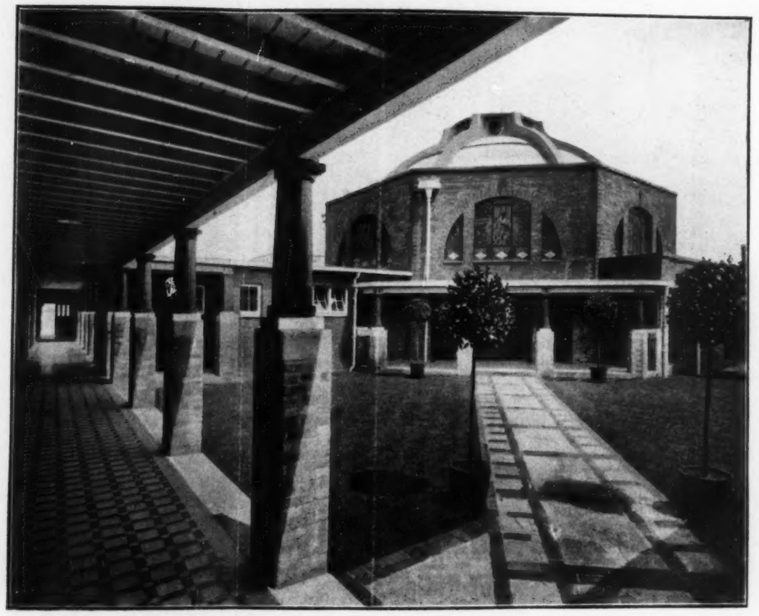


SOUTH FRONT OF SCHOOL.

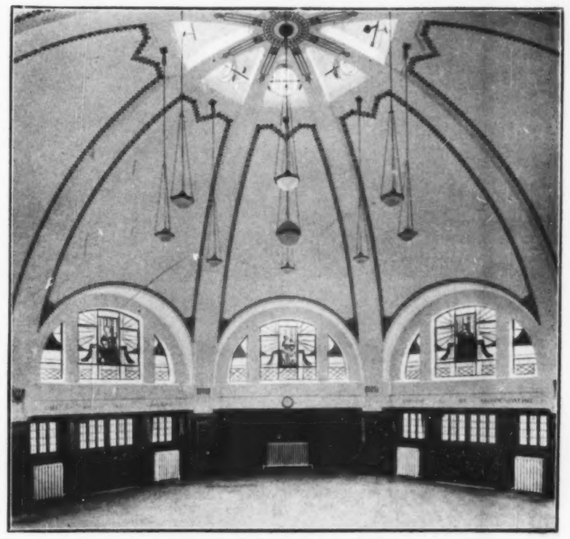
A CLASSROOM.



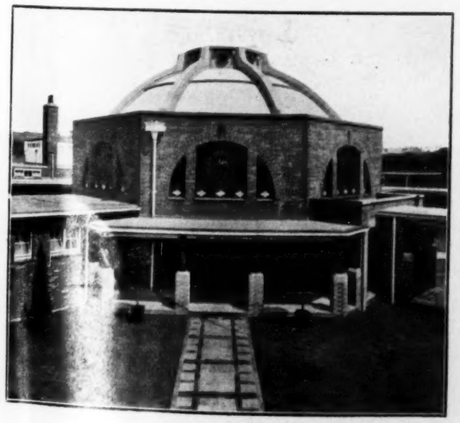
MAIN ENTRANCE.



ASSEMBLY HALL AND COVERED WAYS.



INTERIOR OF ASSEMBLY HALL.



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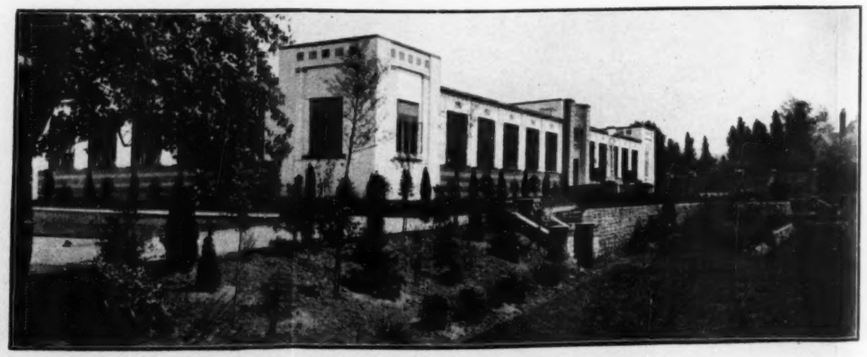


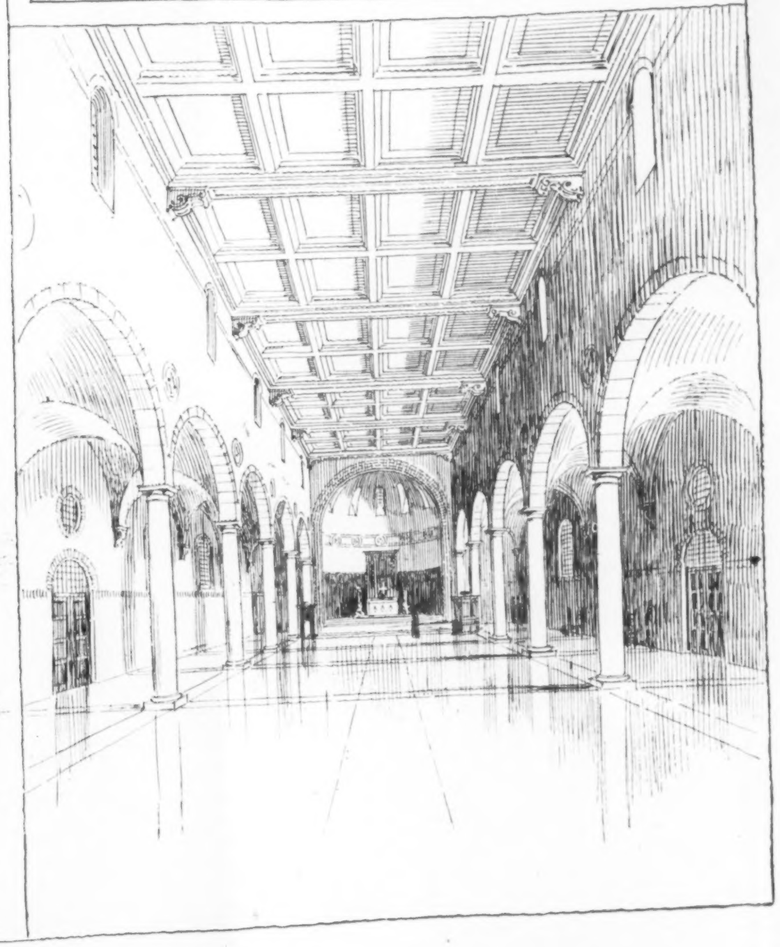
VIEW OF BUILDING AND TERRACE FROM THE SOUTH-WEST.

SCIENCE LABORATORY.

ILKESTON SECONDARY SCHOOL FOR BOYS AND GIRLS.—MR. GEORGE WIDDOWS, A.R.I.B.A., ARCHITECT.

CHURCH OF ST. ALBANS GOLDERS GREEN

WILLS & KAULA ARCHITECTS
3 SOUTHAMPTON STREET W.C.



ST. ALBANS, GOLDER'S GREEN.—Messrs. Wills & Kaula, Architects.

CIVIC DESIGN SECTION.

A NOTE ON AMSTERDAM.

THE designing of a city with the "waterway" as the principal *motif* of the design does not often fall to the lot of the present-day town-planner, nor, for that matter, is there much likelihood, for many obvious reasons, of cities of this kind being laid out in the future. The city of Amsterdam will, however, present much of interest and value to the student of town planning as being one method of solution for a problem of this kind, while its ingenious arrangement may even afford useful suggestions for the scheming of a town where the populace rely on streets for traffic and the carriage of merchandise, and not on canals. The older portion of the city is in the form of a semicircle, the area of which is divided up by a series of semicircular *grachten*, or canals of various sizes, which intersect it in every direction and divide it up into some ninety islands, connected by some 300 bridges. The depth of the water in these concentric canals is some 6 ft. only, and the water, on account of malarial exhalations, is changed frequently by opening the outer gates giving on to the North Sea Canal. Flanking the canals are roadways and avenues of tall elms, which, together with the older brick buildings and their picturesque gables, contribute greatly to the charm of this old-world city. The upper stratum of the soil consisting of loam and loose sand, the houses are constructed on piles varying from 14 ft. to 60 ft. in length—a fact which gave rise to the saying of Erasmus of Rotterdam, "that he knew a city where the inhabitants dwelt on the tops of the trees like rooks."

The city is situated at the junction of the Amstel with the Y (pronounced as *i* long), an

arm of the Zuiderzee which has been converted into an excellent harbour, and it is believed that it owes its foundation to Gysbrecht II., Lord of Amstel, who built a castle and a dam there in the early years of the thirteenth century. The town was almost destroyed by fire in 1421. The Spanish wars indirectly benefited the city, for they ruined Antwerp, and the best of the artisans and merchants were obliged to quit the Spanish Netherlands. It was after the sack of Antwerp that the art of diamond-polishing, unknown in Europe before the fifteenth century, was introduced into the city by the Portuguese Jews. So much did the prosperity of the town increase at this time that its area was nearly doubled, while the conclusion of peace in 1609 and the establishment of the Dutch East India Company made it one of the first mercantile cities of Europe. But the wars with England (1780-1784) materially affected its commerce, and a decline set in, from which the city did not recover until after the construction of the North Sea Canal in 1892. The prosperous period through which the city passed produced, as is usually the case, many of the best architects, among whom may be mentioned Hendrik de Keijser (1565-1621), Jacob van Kampen (1598-1657), and Philip Vinckboons (1608-75).

The old church, which dates from 1300, contains some very fine stained glass from designs by Peter Aertz (1555), while another window bears an inscription of 1648, commemorating the recognition of the Netherlands by Philip V. In the ambulatory are two other windows containing the armorial bearings of the burgomasters of the city between the years 1578 and 1767. The church also contains, most appropriately, memorials to those great seamen who combined to raise Amsterdam to a leading position among the cities of Europe. One, bearing an old Dutch inscription, refers to the endeavour by Admiral Van Heemskerck to

AMSTERDAM
THE OLD CHURCH

AMSTERDAM
— THE REMBRANDT HOUSE —

find a more direct route to China by the Arctic Ocean, and to his spending the winter at Nova Zembla. Elsewhere are memorials to Admirals Sweers, Van der Zaan, Cornelis Janz, Van der Hulst, and Marshal Wirtz, all of whom died between 1633 and 1676. The royal palace, begun in 1648 by Jac van Kampen and finished in 1655, was originally intended as the Town Hall, but was presented by the city as a residence to King Louis Buonaparte in 1807. The gables are adorned with allegorical reliefs by Artus Quellin "the Elder," representing the commercial glories of Amsterdam and her position as queen of the seas. The general arrangement and detail of the building is admirably suited for a place of assembly of members belonging to a wealthy and powerful municipality. It is said to rest on a foundation of 13,659 piles and to have cost 8,000,000 florins. The Rembrandt house, which has now been adapted to contain a collection of the great master's work, has recently been considerably restored, and there seems to have been good reasons for the present treatment of the façade, which is distinctly pleasing. A considerable number of Rembrandt's etchings are now on view there, and this may be instanced as perhaps an almost ideal scheme for an exhibition of this kind, the great painter's work being exposed to view in the very rooms wherein it was first conceived and executed. Some of the modern work, such as the example seen in the sketch, is of considerable merit and well suited to the maritime character of the city.

A TOWN-PLANNING SCHEME: ITS EFFECT ON HOUSING AND ARCHITECTURE.

AT the recent meeting of the Institution of Municipal and County Engineers in the Scottish district, held at Dunfermline, Mr. Raymond Unwin read a paper on the above subject, of which the following is an abstract:—

"A town-planning scheme consists of two parts. There is first a plan, and second the text of the scheme, which includes a series of regulations of the nature of by-laws covering a very wide range of subjects, which may be independent of the plan, or may consist of interpretations of the plan, or regulations which take effect in particular areas defined by the plan. The effect of the scheme therefore depends on the constructive meaning of the two parts read together, and it will only to a limited extent be possible to deal with the parts separately. So far as it is possible, however, it may be well to take the plan first.

The Plan.

There are certain considerations in connection with it which appeal strongly to the architect, whether he is considering the effect on architecture as a whole, or the effect on the domestic branch which we have summed up under the word "housing." The architect's special point of view may perhaps be stated by saying that he looks upon the scheme as a design, as something thought out as a whole, aiming to produce some definite total effect which will depend on the relation and proportion between the different parts. A design must not, however, be taken to mean merely a pretty picture on the paper. Many natural features of the site, many existing conditions, such as the position of railways, waterways, roads, or buildings, will determine the planning, and will very often prevent that symmetry and balance over large areas of ground which would produce the pretty paper pattern.

It is only when all the utilitarian considerations are fused into some consistent design by the exercise of an imagination specially trained to find beautiful forms by means of which to satisfy useful purposes that a really fine town plan is produced. This is the contribution which the architect, as architect, has to make. In the main, it will be found that while the aims and purposes of the architect, the engineer, and the surveyor are different, they are not conflicting, and that a simple definite scheme with wide handsome roads and well-designed crossings and road junctions will be the best form in which to provide easy and convenient thoroughfares.

In considering the scheme of roads it is important to remember the two main purposes for which they are required—to accommodate traffic, and to afford frontages for buildings. Roads generally serve both these purposes, but their treatment depends largely on the relative importance of the two functions; those that are required to serve as the main roadways for traffic should be planned primarily for the convenience of traffic, and their junctions should be considered from this point of view first. On the other hand, those roads, the traffic on which

is mainly concerned with the buildings fronting upon them, should be considered primarily from the point of view of affording economical, serviceable, and therefore valuable building frontages. As far as possible such roads should either follow approximately the lines of the contours or should travel at right angles to those lines, so that the plane of the land in whichever direction it may slope may be nearly square with the building. Both the satisfactory placing of the building on the ground and the convenient treatment of the garden depend considerably upon this. Not only is the importance of traffic secondary in these roads, but it is even desirable that they should not be planned so as to afford short cuts for main lines of traffic. The only way in which it is possible, without great total cost, to secure adequate width for main arterial roads is to design the minor roads so that they cannot become trafficways; the actual width of the carriageways and footways in these may then safely be reduced to a minimum, and the saving in land and cost thus effected can be set off against the extra width and cost of the main traffic highways. This does not mean, of course, that the width between the building lines on minor roads should be reduced, nor even that the width dedicated to the roadway should always be reduced. There will be cases in which it may be desirable, either to provide space for the decoration of the roadways with grass margins, shrubberies, or trees, or to provide space for possible future widening of footways or carriageways, where, owing to the planning of the roads, an increase of traffic seems possible.

Some sacrifice of the building convenience may wisely be made on arterial roads; in order to increase their directness or improve their gradients, we shall be justified in carrying out an extent of cutting and filling that would be unpardonable on a building road. Where there is a choice between cutting and filling, it may be taken as a general rule that filling is most objectionable in roads where dwelling-houses are to be erected, and cutting in roads for business premises. Dwelling-houses are much better built above the road than below it. On the other hand, business premises must be entered on a level with the road, and can usually employ a basement story profitably; this means that when the road is in a cutting heavy expense must be incurred in excavating the site, and sometimes also in sinking cellars still further below the level. The main consideration on the arterial roads, however, must be the traffic; and it is important to consider this in planning the scheme of minor roads. In order that their traffic should interrupt that on the main roads as little as possible it should be collected by secondary roads, and delivered by them at not too frequent intervals into the main arteries. It should not be forgotten when planning that every needless junction or crossing on a main artery reduces its efficiency as a traffic carrier. Moreover, when arterial roads are broken into by too many minor roads the facades of the buildings are apt to become ragged, to lack sufficient breadth and dignity; here as often we find the architectural considerations in harmony with the traffic convenience. On the other hand, in the minor residential roads, the variations which will give further adjustment of the roads to the site, and the limited vistas which

will be produced by so planning the roads that, while they divide up the land conveniently, they do not form tempting short cuts, will help the architectural effect with the type of domestic building for which they are intended. The importance of so planning the roads and road junctions as to give at least a favourable opportunity for the beautiful grouping of the buildings must not be overlooked. A straight approach on an axial line to an important building, and the development of the whole of any civic or other centre composed of a group of public buildings on such an axial line will be found to give a sense of order and dignity.

The Text.

We must pass now from the town plan to the text of the scheme.

Here the architect's point of view is somewhat peculiar. He usually sympathises with the aims of by-laws and building regulations, but is intensely irritated by their methods; and if town-planning schemes are to work smoothly the municipal authorities must try to understand this point of view.

The architect is delighted that adequate space about his buildings should be secured, but he is annoyed when that space is required to be exactly in one position and of an exact dimension throughout the width. He would willingly support the municipal authorities if they would ask for two or three times as much average space about the buildings if only he could be allowed some liberty to dispose this space as may best suit the circumstances of each individual case. He is in full sympathy with the local authorities when they require a certain minimum cubic space to be provided in a living-room; but when he is required to reduce the size of a room by cutting off the angles to provide a minimum height to the springing of the ceiling, either wasting the space or providing cupboards that are not wanted, then he is tempted to put in dummy cupboards and remove them after the building is completed.

He is in agreement with the local authority which has sought to prevent the erection of stuffy and congested closes; but when he finds that he cannot erect a quadrangle of buildings without leaving gaps in each angle or carrying the road right through to avoid a *cul-de-sac*, then by-laws are apt to become his bugbear and the defeating of them one of his chief delights.

The town-planning scheme is largely an extension of the field which may be covered by building regulations, but it is freed from many of the technical difficulties under which by-laws have been made by the local authorities in the past.

Strictly speaking, there are only comparatively few matters on which, previous to the Town Planning Act, by-laws could legally be made; and much ingenuity has been expended by the local authorities and the Local Government Board to make by-laws produce indirectly effects which they deemed desirable, but which they were not legally empowered to secure directly. One result has been that large sums of money have been wasted in making wide roads, because a by-law could not fix a minimum distance between the houses. There is only one way in which building regulations can be made to work satisfactorily, and that is for them to provide sufficiently generously for the requirements to enable a considerable amount of freedom to be left as to the particular method in which they are satisfied. If you secure a sufficiently ample provision of open space about buildings, you can disregard the exact position in relation to the individual building and the exact distance at any point across a particular bit of open space. This is a very important consideration when framing regulations under the scheme for limiting the number of houses to the acre. It is in every way wise and practicable to reduce the average number of houses to the acre over a reasonable area, to such an extent as will secure not only ample light and air space for the houses, but a sufficient proportion of garden ground in relation to the population to provide quite a considerable addition to the economic basis of the family, and sufficient recreation areas for both children and adults; but if this result is to be attained considerable elasticity must be secured. I find that with an average disposition of ten houses to the acre for a rectangular building plot measuring 10 acres there may be usually sixteen or seventeen houses on 1 acre in the corner. If the space is not rectangular, and should be bounded by roads meeting at an

A Block of New Offices, Amsterdam. (*See page* 47.)

angle of 60 deg., there may be twenty houses to the acre on the corner; or if the road should meet at a still more acute angle—say, 45 deg.—the number of houses to the acre may go up to twenty-four or twenty-five if the full use is made of the road frontage, and all the houses are of the smallest type. While, therefore, over the whole unit of 10 acres it is desirable to reduce the number to ten, twelve, or fifteen to the acre, very great care must be taken not to cause a needless waste of road frontage at junctions by insisting on too low a maximum of houses on the individual acre or on too arbitrary a method of measuring it. It will be seen that if the acre at the corners were measured to include more of the back land instead of being made square, the lower maximum number of houses on the individual acre would be practicable without causing waste of road frontage. For this reason I think it is a good rule that the general limitation should be sufficiently drastic to secure plenty of open space, but that the particular limitation applying to the individual acre should be sufficiently generous not to cause unnecessary waste of road frontage. Further, if open space is secured generally by the limitation of the number of houses to the acre, any requirement as to the area of open space at the back of the building, or as to the proportion of an individual plot which may be covered by buildings, should leave the greatest possible elasticity in the laying out of buildings around corners.

It is not generally realised how difficult it is to stereotype the minor development of a plan for a large area without causing very serious waste.

Limiting the Number of Houses to the Acre.

I am inclined to think that the best arrangement for limiting the number of houses to the acre is to fix units of reasonable size, taking, as far as possible, areas that are defined on the town plan by main roads, railways, streams, or other definite features not likely to be changed. There should, then, in connection with each unit, be fixed a maximum average density for the whole of the unit, and a maximum density for any one acre within the unit.

But there is still one point to consider—houses vary very much in size. If it is permissible to have a certain maximum number of large houses on an acre of land, is it not permissible to have a greater number if the houses are each only of one-half or two-thirds the size? In deciding this matter, we must consider the reasons for limiting the number of houses to the acre. These are mainly two—first, limitation aims at providing a sufficiency of open space about dwelling-houses to secure an ample supply of the freshest of fresh air and full access for sunlight, both of which are necessary for health. So far, then, as this reason goes, it would seem to be important to take into account the size of the building in fixing the number to the acre, otherwise the larger the building the less would be the open space. There is, however, a second reason for limiting the number of houses, viz.:—To secure on the average to each family the use of a certain amount of ground. For this purpose the amount of land required is rather a fixed quantity per family, and does not necessarily depend on the size of the house.

There is, however, another pressing reason for doing something to adjust the area of land to the size of the house, and this is the increasing ratio which the cost of the site bears to the cost of the house as that cost decreases.

For all these reasons, therefore, it seems to me of importance that the number of houses to the acre should be limited by means of a schedule, which should fix the number in relation to the size of the house; and for the purpose of determining the size of the house one needs to take the effective size, and to eliminate accidental matters, such as the difference between a high-pitched roof or a low-pitched roof, or the difference between a house that has a large cubic space occupied by foundations, and one that has a minimum of foundations. On the whole, therefore, I think the best plan is to fix the number according to the cubic contents of the building, measured to the outside of external walls, to the centre of party walls, and excluding from the

measurements all unused space above the level of the highest ceilings and below the level of the ground floor of the building. The schedule would then be somewhat as follows, the actual numbers being adapted to suit the individual circumstances:—

Houses containing not more Cubic Feet than	Maximum Average to the Acre.	Maximum on any 1 Acre.
5,000	15	20
6,000	14	19
8,000	13	18
10,000	12	16
12,000	10	14
14,000 and over	8	12

The question of the building line in town-planning schemes has considerable bearing upon the building of houses and the architectural effect of the streets, and it is not easy to frame regulations that will work satisfactorily in all cases. While it is certainly desirable in town-planning schemes that there should be an opportunity for a settled building line more interesting than the simple continuous street line, it is obviously not desirable that houses should be dotted down along the road irregularly just where each individual builder may think fit. For this reason perhaps the best solution of the building-line difficulty is to require a minimum length of building frontage to be submitted, as a definite scheme, where the ordinary building line is to be departed from Clauses to this effect are provided for in the Ruislip scheme.

Having secured ample space about buildings, perhaps the next most important point is to secure that adequate frontage shall be provided for each house, and that long projecting wings shall not be permitted in such a way as to block proper access of light and air to the windows. There is in the Ruislip scheme a somewhat complicated clause dealing with this matter which secures an angle of light of 45 deg., but it does not prevent the window to a living-room being placed at the end of a narrow space between two wings. A simple regulation requiring that all the living-room windows should have a certain angle of light vertically and horizontally would, I think, be more effective, and more readily secure the desired result; such angles should not be less than 60 deg. This would allow of reasonable projections to buildings, but would prevent their undue extension in length, or their undue proximity to each other in the manner that is so objectionable in a very large number of buildings erected under the ordinary by-laws.

In a similar way, one might go through many other individual regulations which aim at something which is desirable, and might point out how easily, if these regulations are looked at apart from the point of view of those who have to build under them, they may prevent many things which are quite harmless from being done, and may even entail the doing of much that is undesirable. For this reason it is most important in framing town-planning schemes that the local authorities should enlist the co-operation and assistance of architects and builders. The Town Planning Act is so framed that any new regulation that is included in the scheme can be carefully adjusted to meet the needs of exceptional cases, and to suit the varying circumstances of different districts, and even different areas within the same district. The framing of such regulations is by no means easy, because it is not only the effect of the particular regulation that has to be considered, but the constructive effect of two or three regulations taken together. What we need is so to frame our regulations that they will effectively prevent anything that is detrimental to health or injurious to the amenities of the district, but will leave the utmost possible freedom for every builder to do anything that he may desire to do that is in itself harmless and unobjectionable.

So far we have been considering the regulations of a town-planning scheme as affecting the placing of buildings and the distribution of space about them; but the town-planning scheme affords an opportunity for modifying by-laws in England, or regulations made under the Burgh Police Acts in Scotland; and these are much needed. In England the by-laws were framed especially to prevent the evils springing from an overcrowded development of small houses packed together in long rows, without proper access, air space, or sanitary conditions. Such packing together of small houses produced certain dangers which had to be met by a fairly complex system of building regulations, aiming to secure protection from fire risks, sanitary conditions, and a certain standard of stability; but if once the overcrowding of these dwellings is prevented by a definite limitation of the number of buildings which may be placed upon an acre of ground, the whole character of development is changed; the relative importance of many matters must necessarily change also.

In Scotland the Burgh Police Acts have been largely framed with a view to meeting the difficulties arising from the prevalence of many-storied tenement dwellings. With a limitation of the number of dwellings on the acre, there can be no doubt that this system of housing families one above the other will give place to that of housing them each in their own house, standing on its own plot. It is necessary, therefore, that all the regulations embodied in the Burgh Police Act, or enforced by Dean of Guild Courts, should be reviewed in the light of the new conditions set up by the Town Planning Act. For example, where population on the acre is as dense as it usually is with many-storied tenement-house development, certain expedients have been adopted to try to secure a modicum of fresh air for each person. Among these, the heights of rooms have been fixed much greater than is commonly adopted where cottage dwellings are built. It may or may not be some slight advantage for comparatively small cottage rooms to be 9 ft. or 10 ft. high; opinions widely differ as to whether any height above 8 ft. is really of advantage in such rooms; but it is hardly open to doubt that it would be a much greater advantage to secure an extra foot in the size of the room, and, further, that additional height over 8 ft. when all the rooms have windows looking out upon ample open space is, to put it at the highest, such a very small advantage that the local authority is not justified in compelling it. The cost had much better be spent in making the rooms a little larger, and under the town-planning scheme, which allows rooms to be 8 ft. high, a provision requiring a minimum floor space or a minimum cubic space, or both, can be inserted.

Let it not be supposed that housing reformers are asking for by-laws to be relaxed; nothing could be further from the truth. In asking for a limitation of the number of families which should be allowed on the average to occupy an acre of ground, housing reformers are calling for a far more drastic regulation than anything which has ever been proposed, one which so alters the character of development that it renders many old regulations no longer necessary, and what they seek is that certain minor requirements chiefly applicable to the older types of development, which are found to hamper the newer and better system, should be removed or adapted to the new conditions.

Certain other regulations should be considered also in reference to the introduction of new building materials, notably in regard to concrete and reinforced concrete, for both of which there is undoubtedly a future as building materials for dwellings in those districts where suitable aggregates are plentiful, and where the more ordinary building materials, brick and stone, are not so easily obtained.

Control of Character of Buildings.

The Town Planning Act gives power to control the character of buildings, and this would seem to carry with it the right to exercise some supervision over the general character of their designs and the materials of which they are composed, with a view to preserving or securing the amenities of the scheme. Such power has been exercised in the past by enlightened ground landlords in developing their estates, but has not been given to local authorities. It is admittedly a matter of some difficulty, because design or character cannot be defined in precise terms of number or measurement, and, moreover, is subject to a certain variation of individual taste and opinion, but none the less I believe that some such control is desirable, and that the difficulties are less than appear. Now in the regulation of design by a local authority, what is aimed at is not to secure absolutely the best among the many good designs, but to maintain a certain average standard, to preserve streets from being spoilt by the erection of buildings which are monstrosities of ugliness or bad taste. This I believe to be both practicable and desirable; but it is work that should not be attempted by a committee of laymen. Only the trained architect is qualified to exercise this function, and where the local authority desires to criticise the general character or design of buildings, it is at least due to those submitting plans that the criticism should be only entrusted to a well-qualified architect of such standing and independent position that he is not likely to be influenced by petty considerations.

What the municipal authority can do for architecture by means of a town-planning scheme, and by the control of buildings, is not to secure fine architecture, but to grant an opportunity for its development, to prepare an adequate stage for its display, and to protect such fine architecture as may arise, and as I believe will arise, out of these better conditions from being spoiled by incongruous surroundings and the ugly freaks of eccentric fancy.

If by means of co-operation between the architectural profession and the municipal engineer a mutual understanding of this position can be secured, a very great step will have been taken towards the building up of more beautiful cities in this century than those which have resulted from the activities of the last."

During the discussion which followed,

Mr. Ross Young

said he would have liked Mr. Unwin to explain to what extent it was desirable to go into details in a town-planning scheme. Some recommended showing only the arterial roads, others recommended showing the arterial and subsidiary roads, leaving out only the minor roads. He found great difficulty in laying out the roads before one had a complete plan and negotiated with the landowners, who always wanted to know how the scheme was going to suit his building plots. If they were going to secure open spaces in proper positions they must have a proper scheme; they required a full detailed plan in order to save these open spaces. In all the schemes which had been prepared the land unit question had been dealt with in different ways. He believed that the Birmingham, Ruislip, and the German schemes all different in regard to that matter. As to applying the land unit, they wanted to know whether physical boundaries settled the matter. There was much to be said for that method. Then Mr. Unwin raised the question as to the power an authority might exercise with regard to the design of a building. He was not sure that the Act provided for that. He did not think they could say to the person building that his design was not very pretty, and they would not allow it.

Mr. Bailie Norval

said they felt that Dunfermline had done some very effective spade-work so far as Scotland was concerned in adapting the provisions of the Town Planning Act to Scottish requirements and Scottish necessities. It had been suggested that a ceiling height of 8 ft. or 8 ft. 6 in. was much too low. He did not know how it would be received in Scotland, but they had incorporated those figures in their scheme—8 ft. 6 in. for the ground floor and 8 ft. for the top floor of cottages. They considered that by giving ample cubic air space they compensated entirely for the lowness of the ceiling. If any of them had ever lived in a house with an 8-ft. 6-in. ceiling height they would realise, provided they had sufficient floor space, that it was not such a very low ceiling after all and that the room was quite comfortable. They had put that into the scheme in deference to the Admiralty, whose opinion was that houses of the English type should be provided for the large population from England which was expected to settle in Dumbarton for the working of the naval base. Those would be the first houses to be built in the new area, and they would serve as an object-lesson for the rest of the area after the scheme had got under way. The main feature of the scheme was actually the provision of two large main arteries leading direct from the naval base to Dunfermline, and an endeavour to preserve to the utmost the individuality and character of the old town. They had planned these two main boulevards to make them attractive arteries to attract the population to gravitate north towards the old centre. They wished to ensure that the new town should not develop a distinctive and alien character of its own to the submergence of the individuality of their old grey town.

Councillor Deas

asked as to the possibility of having competitive schemes for different areas. Reference had been made to the new town of Edinburgh having been the result of competitive schemes, and he would like to know whether the principle was feasible under present-day conditions.

Mr. J. Young
proposed a vote of thanks to the author of the paper. He thought that of Mr. Unwin was like his book, suggestive and inspiring. Mr. Unwin had gone into the principles of town-planning schemes very thoroughly and had raised a very high ideal in their minds as to what to attempt in planning out different areas.

Mr. W. A. Macartney,
who seconded the vote of thanks, said the paper had a distinct individuality and was of great value to the public. It was sometimes laid to the charge of engineers that their designs were not very pretty, but generally engineers' designs were workable, and that was the main thing to be considered.

The Chairman
said he hoped that in the Dunfermline scheme they would be able to abolish the tenement system throughout the area. He did not see why they should not be able to do this, because he understood that the land was to be got from £10 an acre per annum. In Glasgow and its suburbs they had to pay six to ten times that price, so that there they were up against the tenement system, and had been so at all the conferences that had taken place during the past year. It was impossible to get cottages where they wanted them in Glasgow, but he did not see anything impossible in regard to getting them in the Dunfermline area. He was sure that Dunfermline had the sympathy of the whole of that meeting in the hope that tenements would not be planted in that area. He was inclined to think that the Town Planning Act gave them some control over the character of the buildings, and he thought that every locality which went in for a town-planning scheme should have an advisory architect. It would probably not be possible for a small authority to have an architect permanently employed, but they could retain a man of some standing to whom plans could be referred when necessary. In a city it was not difficult to keep an architect for that work, but every authority should be in a position to prevent the monotonous repulsive style of building that had been going on for so many years in their Scottish towns.

The vote of thanks having been carried,

Mr. Raymond Unwin
replied to the criticism as to the height of ceilings, and said if they were going to lodge a number of families in one room the limit of the number of families was the limit of floor space, and they must have high ceilings. But he hoped they were going to change that in Scotland and were going to use the Town Planning Act to control the land in such a way that they would not be forced to pile families one upon another as in times past. The builder should be persuaded that he would be wise in building over as wide an area as possible so as to get as many acres as possible covered. That was the whole secret of town planning. They would not find in countries where town planning had been put into practice those dreadful tenements. Every family ought to have a cottage of five or six rooms, and they would find it better to have the space outwards than to have it upwards. With regard to the character of buildings, he could only say that he thought that what their Chairman said was well worthy of consideration. Architects thought that there ought to be architectural control over the elevations of buildings so as to get a harmonious effect, and this could not be achieved if people were allowed to put up whatever they liked. The Local Government Board were advised that in England this control could be exercised under the Town Planning Act. He heard only the other day of a deputation from the Royal Institute of British Architects to Mr. Samuel, who, in all probability, would propose to substitute an appeal to an architect appointed by the R.I.B.A. for the appeal to the Local Government Board. Personally he did not say that that was the best course, but it was evident that they had the sympathy of the Local Government Board. The suggestion by Mr. Bryce of a consulting architect for a local authority was one that deserved consideration, but it would not meet every case. Where the elevation was in question the surveyor was not the man to decide, just as they would not expect an architect, as a rule, to have studied road problems. The architect might readily suggest what would really be an improvement, but might involve some inconvenience or undue cost to the owner. Thus they had got to weigh two things which were not readily comparable. An architect might quite rightly want to see the design of a building improved, whilst his client might quite rightly plead that the alteration would involve an extra cost or some inconvenience which he did not feel called upon to incur. He thought there should be an appeal to some impartial person appointed probably by the Local Government Board, who should decide whether or not what the architect required was of sufficient importance to put the expense of it upon the man who was to build. He thought it was best to have a practising architect of some standing to whom the plans could be submitted; the cost would be trifling, and the improvement in the town would be vastly greater than in any other way. As to the details of a scheme being shown on the plan, he believed that the right way in town planning and the way in which they would very shortly be expected to proceed was to have two stages, and that on the first they should have a somewhat definite skeleton plan. Then they should proceed to get agreements between the landowners and the local authority so as to avoid running any risks of having difficulties afterwards—that was a point not provided for by the Act. Then they would be in a position to superimpose details. The whole area of a town ought to be protected at once, and the chief roads should be indicated and other points which were of very great importance, as putting limitations on the use of the land, should be sent out as soon as possible. Then they could go on and prepare their detailed scheme, and that was where time ought to be taken. The first stage ought to be quick, and the second very slow, whereas it was too often the case that the first stage had to hurry over the second stage because they had difficulties which had not been provided against in the first stage. He quite agreed with the gentleman who said that they must at once state their outline to a large extent, so that they might get their main lines rightly placed and the details filled in. But it was dangerous to put too much detail into the plan unless they could find some way, as had been done in Dunfermline, to provide a certain series of detailed roads which were specially indicated on the plans, though, of course, subject to some possible modifications. As to contouring, it was far and away the most economical thing to contour their land before laying out a road.

TOWN PLANNING FROM A LAWYER'S POINT OF VIEW.

THAT the Housing and Town Planning Act, 1909, will prove no exception to the saying that no Act of Parliament has ever yet been passed which did not contain loopholes big enough to allow a horse and cart being driven through it by astute lawyers whose clients desired to avoid its restrictions was made clear by Mr. John C. Jack in his paper, "Town Planning from a Lawyer's Point of View," read before the recent meeting of the Institution of Municipal and County Engineers held at Dunfermline. He put down the fact that so far the Act had not given rise to much litigation to the necessary delays in enforcing schemes which have up to the present been sanctioned. He mentioned that already some of those who are engaged in preparing town-planning schemes are constantly having points raised, some of which might be termed fantastic in conception, whilst others presented real difficulties calling for serious attention and prolonged consideration.

Mr. Jack pointed out that it should be borne in mind that the right to town plan was not an absolute one in so far that local authorities promoting schemes are directed to endeavour by means of conferences or otherwise to secure the co-operation of owners, parties interested, and local authorities interested in the lands affected. That obviously meant that where a landowner had views with regard to the laying out of his lands a local authority is bound to give these every consideration.

Many interesting points appear to have arisen in connection with the Dunfermline town-planning scheme, and amongst others Mr. Jack mentioned the following one. Some time before the scheme was resolved on a building syndicate acquired some ground in the heart of the area to be included in the scheme, and plans were lodged for the erection of three-story tenements, having a density of about sixty houses per acre. This was considered by the Corporation to be objectionable, but owing to the period of two months which requires to elapse between the date of notice of intention to make an application and the actual making of the application there was sufficient time for the syndicate to complete their contracts for and actually to start the erection of their houses before the application could be made. Acting on Mr. Jack's advice the Corporation therefore made application to the Local Government Board to fix the date of their first advertisement of intention to apply for authority to prepare a scheme as the date after which no compensation should be payable on account of any building erected on or contract made or other thing done with respect to the land proposed to be included in the Corporation's town-planning scheme. As a result of this application and discussion the Board practically agreed thereto, and Mr. Jack considers that it shows that once a local authority have resolved to proceed with a town-planning scheme they are in a position to effectually protect the amenity of the area proposed to be included therein pending the decision of the Local Government Board on their application.

EARLY EXAMPLES OF TOWN PLANNING IN THE CITY OF EDINBURGH.

IN dealing with this subject in a paper read before the meeting of the Institution of Municipal and County Engineers, held recently at Dunfermline, the Engineer to the Corporation of Edinburgh, Mr. A. H. Campbell, said that the most striking contrast to the closely-piled and many-storied blocks of the Old Town was the straight, rectangular plan distinctive of the New Town, with its wide thoroughfares, its lavish allotment of land for gardens, and the stately edifices flanking its principal thoroughfares. It is, as it were, the swing of the pendulum from the congestion resulting from close aggregation of people who inhabited the pent-up closes of the ancient Royal Mile—known as High-street and Canongate—to that of distribution of the people which resulted from the planning and development of the New Town.

In recapitulating the history of town-planning events in Edinburgh Mr. Campbell drew attention to the importance in town planning of securing good and suitable vistas as the natural and proper termini to leading thoroughfares, and that not only in the formal type of town planning, but likewise in the freer treatment of the informal style adopted in the planning of suburban parts. It would be conceded that the various designers of the New Town of Edinburgh recognised the part which may be played in giving to leading streets suitable terminal features.

CIVIC DESIGN NOTE.

Experiments in Road-Making.

ACCORDING to our contemporary, the *South-Eastern Gazette*, Mr. Alfred Dryland, Surveyor to the Surrey County Council, is now engaged upon an experiment in main road construction which may have very far-reaching effects. Owing to the enormous increase in heavy motor traffic, and especially in the number of motor-omnibuses on the roads, Mr. Dryland has come to the conclusion that water-bound macadam roads must be superseded by a more durable method of construction, and he has succeeded in convincing both the Surrey County Council and the Road Board that the best wearing surface is a dense asphaltic composition. Properly laid, he is of opinion that the life of such a road will be from seven to fourteen years, and that the cost will not much exceed the upkeep of the present macadam surface. In order to put the matter to a satisfactory test, Mr. Dryland has been authorised by the County Council to treat 26½ miles of main roads in the eastern part of the county with a finished thickness of 3½ in. of high-class bituminous material, which he proposes to lay with his own plant at a cost of 4s. 6d. per yard complete. The total estimated cost of this experiment is £87,972, and towards this outlay the Road Board has promised in grants £34,556 and in loans £43,500. Including the repayment of the loans over a period of five years, the cost to the County Council will be £57,750, which is £655 a year in excess of the cost of the present macadam roads.

THE BUILDING TRADE.

FROM WORKMAN TO MASTER.—III.

THE beginner who contemplates starting for himself as a speculative builder will have to decide when and where the start is to be made.

As to where he shall start, two sets of considerations present themselves. As we are dealing with the rise of a workman to mastership, it follows that he will generally have to start on a meagre capital, and it will be necessary for him to rely upon business friends to some extent who will trust him with goods on credit. Of course, the less he has to rely upon others the better in every way, but it may be very helpful in emergency to know that his credit is good.

If he is well known as a successful foreman and manager and as one who is true to his promises, that will now stand him in good stead. If he is then careful to see his way to pay punctually for everything he buys, his credit reputation will soon grow.

He should make it a point of honour to acquire a high reputation for punctual payment; it will enable him to buy cheaper, it will bring people to him with bargains, it will enable him to make profits by securing trade and cash discounts when prices are bad, whilst slow payers are losing money.

It is no uncommon thing for large contracts to be taken at such close prices that the only profit possible is that derived from the cash discounts received for prompt payment. Money now is always worth something more than money at some future date; that is why ample capital is so essential in business and what is meant when people say money makes money.

It follows that a man must rigidly trade within his capital, otherwise he will be the sport of fortune, because he can only trade beyond his capital by going in debt to someone, probably a bank, and by keeping his turnover going. Any check is therefore highly dangerous; a slump in trade makes orders difficult to get or houses hard to sell, banks get uneasy at the first hint of bad trade and begin to reduce overdrafts, and creditors, especially bankers, have no practical sympathy for those who cannot pay their debts.

In deciding where a man will start business for himself, having given due weight to the goodwill of business friends, he must next give careful consideration to the prospects in the town where he proposes to begin. As to when he should start, for a speculative builder it is essential that new houses should be in demand, not merely for renting purposes, but to purchase. Unless he can keep selling he will quickly find himself at a standstill with his capital sunk.

This has been the case during recent years all over this country; houses have been almost unsaleable and speculative building at a standstill. It has been due to various causes, partly legislative, partly financial, and partly because of the many more openings now for small investors who formerly bought houses.

Meanwhile there is almost a house famine in certain towns, and the time must be at hand when capital seeking investment will once more flow into house property. A slump in the national trade would hasten such a movement, especially if a world-wide decline in trade occurred and put a stop to the vast export of capital to foreign lands which has gone on for so long.

Capital in these days flows where the promise of profits is largest, and until the returns on house property become sufficiently great to attract capital there will be but little speculative building.

If, therefore, any young man is thinking of making a start for himself he had better restrain his impatience until house property becomes readily saleable.

The next consideration is that the town where he proposes to start should be a growing town, and this generally means that works or factories or mines are being opened or developed—it would be futile to start in a sleepy county town.

Then the position of available building and is important. A beginner must try cottage or villa property first, or he will put too many eggs into one basket. Small profits and quick returns must be his motto. Time is of vital importance if he is to make his small capital serve his turn.

This implies that he must consider the ways and wants of working folk who need easy access to their work, easy access to small allotments for gardening purposes, a good supply of small traders, and relatively low rents. He must try to combine these things in choosing a site whereon to begin to build speculatively.

Considerations as to time make it evident that he should start at such a period of the year as will give him the advantage of good weather conditions, so that he can build quickly and so that his houses shall be finished and ready for occupation at a time of year when people are on the move.

He should give thought to the kind of house he will build; there will be plenty of others building against him, and his houses will have to compete with them for public favour.

Working people have tastes of their own, and those houses will most attract which appeal to their tastes; he should study their wants, especially those of the women folk; the houses must be attractive-looking to them, the surroundings pleasant and open.

Allotments should be handy; a tired man does not want to go far to get on to his bit of land.

The internal arrangements should be simple but practicable; workmen's wives like to keep their houses clean and bright and cheerful, but they often have to help the family exchequer by taking in washing or other work, or by going out to work, and they do not want to have to spend too much time in keeping their own home nice. There is home washing and cooking and bathing of children to do; the facilities for these should be thoroughly practical but simple, and a drying and play ground for a group of houses would be valued both by the wives and by the children. The finishing should be smooth—rough walls and woodwork making cleanliness difficult—floors should be pleasant to the eye and readily kept clean and need the minimum of carpeting.

The houses should be well placed to get the sun and wind on both faces, and windows should be of good size and made to open. The planning should be practical, avoiding dark staircases and poky places and sloping ceilings; cupboards are needed, and the needs of a family should be studied in the bedroom accommodation.

Theoretically the back kitchen in a cottage should be the place where the work should be done, and the front room should be a glorified kitchen and living-room combined; but there is a strain of very human vanity in the demand, if there really is such a demand, for a front parlour, and it may have to be conciliated.

The writer knows of cottages where the inmates habitually eat and live in a sort of scullery about 9 ft. square, with a wretched fireplace and a staircase leading out of it. At table one sits between two doors and could put one's hand out through either; the front room is, however, a good room about 12 ft. square, with a pleasant outlook on to a river. It is only used, however, on a Sunday when the man of the house takes an afternoon nap there; it is filled with silly knick-knacks, so that there is hardly room to put a book down. One would think that they would live in the front room and use the back one solely for rough work; its floor, by the way, is roughly tiled, while that of the front room is boarded and carpeted.

There is no accounting for tastes, so the builder must study his clients and provide for their wants, sometimes against his better judgment.

Whatever kind of house property he decides to go in for it must go with a rush, let quickly, sell readily. If he makes a hit or two in his building speculations he is likely to attract the attention of those who have land which they want developing, and they will be disposed to place inducements in his way if he will venture first and show his more timid competitors the way.

The writer knows of a case where a speculative building firm with a rising reputation received a substantial bonus on signing contract for no other reason than that given above, and many instances occur where preferential terms are given to men who have the reputation of making their ventures go with a rush.

It will therefore pay the beginner, however humble his start may be, to put his best into it, for he never knows who may have an eye upon him and how he is being weighed by the judgment of his fellows.

(To be continued.)

BUILDING AND LABOUR NOTES FROM AUSTRALIA.

Activity in Building Operations.

THE building trade in New South Wales continues brisk. Last year over £6,000,000 was spent on the city of Sydney in the erection of buildings. This is slightly above the average, and more than was spent during any previous year. In spite, however, of what has been spent on new buildings, requirements of the population have not been overcome. There is still a scarcity of houses. That more buildings have not been erected is due mainly to increased cost of labour and material, and dearness of money. Figures just prepared by the Government Statistician go to show that during last year there was a decrease in the cost of living throughout Australasia in every item except rent, which actually increased.

Wages in the Building Trade.

In spite of the slight falling-off in the cost of living, fresh demands have been made by many employees' unions for substantial increases in wages. At the present time carpenters' wages are 72s. per week at Sydney and Perth and 69s. 8d. at Melbourne for a week of forty-eight hours. Bricklayers and other skilled callings in connection with the building trade are paid much the same. Painters at Sydney receive 64s. per week, and are now demanding an increase to 1s. 6d. and 1s. 8d. per hour. Brisbane painters are asking for an increase to 1s. 7½d. per hour, 2s. a day extra for swinging-stage work, 1s. extra for foremen, and that the working hours shall not exceed forty per week.

Dearth of Apprentices.

The rates of wages given above do not fully represent the substantial increases made of recent years in the cost of labour in connection with the building trade in Australia. Unionists take strong exception to junior and unskilled labour. Apprentices are discouraged, because it is thought that they compete with workmen now at the trade, and tend to increased competition for employment in the future. Apart from the absurd limitation of apprentices, there is another element which mitigates against the employment of youthful labour in the building trade. This is the high wages and favourable conditions offered in comparatively unskilled callings. Lads on leaving school may obtain 30s. or £1 per week driving carts or engaged in similar blind-alley occupations. The result is there are scarcely any apprentices being trained, and supplies of skilled mechanics have to be repleted mainly from new arrivals from Great Britain. Though local governments discourage the immigration of skilled mechanics who would compete with local tradesmen, as a matter of fact such are better equipped than any other class to make a success in Australia.

Cost-of-Living Inquiry.

Mr. Justice Heydon, President of the Industrial Arbitration Court, has just delivered his judgment in connection with a lengthy inquiry into increased cost of living in New South Wales. The object of the inquiry was to arrive at a fair rate for a living wage, below which it will not be legal to pay any adult employee. The result of his Honour's inquiry is that the cost of living for two adults and two children, occupying a house with three rooms and a kitchen, is £2 8s. per week. His Honour recommends that all Industrial Boards (of which there are some hundreds in

New South Wales) should base their finding upon his ruling. The lowest wage for light labour should be 8s. 6d. per day, ordinary labour 8s. 9d., and for heavy labour 9s. He holds the view that the living wage should rise and fall according to the Government Statistician's tables showing the variation in the purchasing power of the sovereign.

Scarcity of Houses.

His Honour made reference to recent experiments of the New South Wales Government in which it built a suburb consisting of workmen's dwellings in order to provide accommodation at low rentals for working men. Of these houses, he said, there were three types, containing three rooms and a kitchen and other accommodation. The rentals were 14s. 6d. and 16s. Regarding the shortage of houses, his Honour went on to say:—"The evidence was all one way as to the shortage of houses, and the great difficulty of getting one at all. It is said that very little building of workmen's houses is going on, though the population is fast increasing. The exact cause of this I could not discover. Then the expense of building is greater. The transfer of the burden of taxation from the house to the land has been largely utilised by the limitation, by the councils, of the owner's freedom—rejecting his plans, forbidding terraces, etc. Many agents have a standing notice, "No houses to let." If signs appear that a piece of ground is to be built on, applications to rent the house at once come in. Vacant houses are overapplied for. Working men cannot keep to their own suburbs, but have to look for houses wherever they can. Outgoing tenants demand bonuses, or require that their furniture shall be bought; and it was alleged that some landlords and furniture dealers mulct incoming tenants in the same way. The evidence has satisfied me that, at the present time, in Sydney, there is unusual difficulty in getting houses, and certainly it seems to me as if the rise in rents is likely to continue."

Cost Entailed by Labour Legislation.

To give English readers some idea of the cost to the community of Industrial Courts and Wages Boards, it might be mentioned that the inquiry of which the finding referred to above is the outcome cost in the taking of evidence upwards of £10,000. The cost to the New South Wales Branch of the Employers' Federation, who watched the case in the interests of employers, came to over £3,000.

Architects' Exhibition.

The fifth biennial exhibition of the Institute of Architects was held at Sydney recently. Though not particularly well attended, the exhibition appears to have been a success. Many leading architects were well represented by exhibits which, on the whole, were of a high order of merit. The character of the designs exhibited showed that New South Wales architects have fairly high ideals and are progressing on right lines. Simplicity and an absence of ostentation are characteristic features of the bulk of better-class work, such as designs for warehouses, churches, public buildings, private residences, and residential flats.

Altered Taste in Decoration.

No better indication of change in taste in connection with the building trade in Australia can be afforded than the alteration in the class of building material used. Leading architects discourage shams of all kinds, of which embossed steel for interior walls and ceilings is a noted example. Even plaster is discouraged by some in favour of plain brickwork for interior walls, with woodwork in dull natural finish. This class of thing, however, is possible only to a limited extent. Paint cannot be dispensed with, as is indicated by the very large increase in the importation of paint (most of it comes from England) during the last few years.

An indication of an alteration in public taste is a marked falling-off in the use of wall-papers. In the Northern States wall-papers are scarcely ever used. A painter in a leading Queensland town informed us recently that in thirty years he had hung wallpapers in only one house. In Southern States, however, wall-papers enjoy great popularity because the walls of cheap country dwellings are canvassed and papered, instead of being lined with tongue and groove lining boards, as they are in Northern States. But in connection with better-class dwellings the decline in popularity of wall-papers is undoubted. Preference is given to other materials such as distemper, water paints, or the new flat wall finishes. In fact, the paint manufacturers advise that the sale of oil paints for interiors has increased considerably in popularity, and that in future there is likely to be a very big demand for this class of goods.

THE PRESENT POSITION OF THE LONDON DISPUTE.

SINCE our last issue the employers have signed new working agreements with the stonemasons and the engine and crane drivers. Negotiations are in progress with the labourers, carpenters and joiners, woodcutting machinists, and plasterers.

Meanwhile the National Federation of Building Trades Employers has issued manifestos and voting papers to its members in accordance with its resolution of June 19. Numerous meetings are being held in the provinces in connection therewith.

APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 to 1909.

THE Building Act Committee of the London County Council have consented to the following applications under the London Building Acts, 1894 to 1909:—

Lines of Frontage and Projections.

City of London.—Iron and concrete gangways over the public way of Hanging Sword-alley, City, between the premises of the *Daily Chronicle* newspaper and *Lloyd's News* (Messrs. A. Vigor, Ltd.).

Dulwich.—Erection of six houses on the north-eastern side of Lordship-lane, Dulwich (Messrs. E. Evans & Sons).

Fulham.—Motor garage at the rear of No. 219, New King's-road, Fulham (Messrs. W. Brooks & Co. for Dr. D. A. Simon).

Kensington, South.—Bay-windows and a porch at No. 46, Victoria-road, Kensington (Messrs. C. Saunders & Sons for Mr. F. E. V. Beanes).

Norwood.—Eighteen houses, with projecting porches and deal bargeboards, on the southern side of Chestnut-road, Norwood (Mr. A. R. Westworth for Messrs. J. Watson & Sons).

Wandsworth.—Erection of building on the northern side of Pirbright-road, Southfields (Mr. W. G. Harrison for the First Southfields Troop of Boy Scouts).

Wandsworth.—Bay-windows at Nos. 66 and 68, Hereward-road, Tooting (Mr. G. Enticott).

Woolwich.—Six houses with porches and bay-windows on the northern side of McLeod-road, Woolwich, between Conference-road and Kneehill (Mr. A. H. Durnford for the Royal Arsenal Co-operative Society, Ltd.).

Woolwich.—Bay-windows to eight houses on the northern side of Glenlea-road, Eltham (Mr. J. J. Bassett for the Right Hon. Lord Rowallan).

Width of Way.

Wandsworth.—Motor garage at the rear of No. 52, Lewin-road, Streatham (Mr. R. J. Adams for Mr. M. O'Brien).

Westminster.—Erection of a building upon a site abutting upon Vauxhall Bridge-road, Carey-place, and Douglas-street, Westminster (Messrs. Taperell & Haase for Halley's Industrial Motors, Ltd.).

Width of Way, Projections, and Constructions.

Rotherhithe.—Steel and concrete gangway at Butlers Wharf over the public way of Gainsford-street, Rotherhithe (Messrs. G. Potton & Son).

Lines of Frontage and Space at Rear.

Kensington, North.—Alterations and additions at No. 9, Lansdowne-road, Kensington, abutting also upon Hanover-terrace (Messrs. Holland & Hannen for Mr. E. Davis).

Marylebone, West.—Erection of a block of flats on the site of Nos. 6-8, Maida-vale (Mr. A. Davis for the Central London Building Company, Ltd.).

Formation of Streets.

Wandsworth.—Order to Messrs. Marten & Carnaby, sanctioning the formation or laying-out of streets in connection with the erection of a proposed hall and garage upon a site at the rear of houses on the western side of Streatham High-road, the northern side of Guildersfield-road, and the southern side of Penistone-road, Streatham.

Space at Rear and Alteration of Buildings.

Chelsea.—Erection of additions at the rear of No. 24, D'Oyley-street, Sloane-square (Messrs. Barratt & Driver for Mrs. A. Banbury).

Hackney, Central.—Alterations at No. 151, Lower Clapton-road, Hackney (Mr. H. C. Hollis for the trustees of the N. Salaman Estates).

Cubical Extent.

Haggerston.—Conversion of a disused gasworks building upon a site at the junction of Tuilerie-street and Edith-street, Hackney, into a clothing factory (Mr. W. Hearn for Messrs. Milns, Cartwright, Reynolds, & Co., Ltd.).

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

ATHERSTONE.—Plans passed:—One house on Dordon-road, for Mr. C. Clark; two houses on Birchmoor-road, Dordon, for Mr. J. Stretton.

Batley.—The T.C. have approved of a scheme for the provision of a new police-station, police-court, and inspector's house, at an estimated cost of £6,300.

Blackpool.—Plans passed:—Whitegate Brick Company, street plan, Oxford Estate, Whitegate-drive; Mr. R. Whittaker, two semi-detached villas, Layton-lane; Messrs. Wilson & Thornton, four houses, Chesterfield-road; Mr. Tomlinson, two houses, Warley-road; Mr. W. Chadwick, one house, King Edward-avenue; Mr. J. Naylor, two houses, Kensington-road; Mr. A. Fletcher, two houses, Read's-avenue; Mr. R. G. Bateson, two semi-detached villas, St. George's-avenue; Mr. James Harris, pair of villas, Manor-road; Mrs. Caroline Dewhirst, four cottages, Fairhurst-street; the Blackpool United Hebrew Congregation, Synagogue, Leamington-road; Mr. F. J. Pennington, additions and alterations, Arnold House School, Lytham-road South; Mr. W. H. Smith, alterations and additions to premises, Gainsboro'-road; Mr. W. Bailey, alterations and additions to premises, Manor-road; Mr. J. Oldham, alterations at rear of premises, 4, South-parade; Mr. Robert Clare, shop window to premises, Woolman-road and Orme-street; Mr. Robert Halstead, bay window to premises, Brunswick-street; Lancashire and Yorkshire Railway Company, shop, Chapel-street; Mr. W. Clarkson, two shops, Whitegate-drive; Mr. Fred Fish, additions and alterations to premises, corner of Claremont-avenue and Warbreck-road; Mr. T. Clegg, additions to workshop, 186, Central-drive; Mr. J. Hall, motor garage, off Waterloo-road; Blackpool South Shore Pier and Pavilion Company, Ltd., wind screen, Victoria Pier; Messrs. T. W. & C. H. Shaw, street plan adjoining Waterloo-road.

Burgess Hill.—The Congregational Church intend erecting a Sunday-school, at a cost of £1,200.

Chesterton.—Plans passed by R.D.C.:—Two houses at Cherryhinton, for Mr. Ellis Merry; and six houses at Cherryhinton, for Mr. C. Scott.

Chorley.—The L.G.B. have held an inquiry into the application of the T.C. to borrow £1,300 for sewerage work and £8,400 for the erection of public baths.

Coventry.—Plans passed:—Six houses, Swan-lane, for Mr. F. Brookfield; house with shop, Swan-lane, for Mr. F. Brookfield; house, Clay-lane, for Mr. H. J. Emery; house and shop, Queen Mary's-road, for Mr. J. Isaac; two houses, Crabmill-lane, for Mr. H. Hiorns; four houses, Brighton-street, for Mr. F. Brookfield; four houses, Shackleton-road, for Mr. W. Morris; six houses, Harefield-road, for Mr. Matthews; twelve houses, Dugdale-road, for Mr. J. Twigg, sen.; carpenter's workshop, Cash's-lane, for the Standard Motor Company, Ltd.; pump-house, Webster's brickyard, Stoney Stanton-road, for the Hon. C. S. Irby; two garages, Barras-lane, for Messrs. E. & A. Mayo; two houses, Broadway, for Messrs. S. Cox & Co.; factory, garage, and offices, Little Park-street, for Mr. E. Harris; three houses and house with shop, St. George's-road, for Mr. E. J. Sutton; eight houses, Freeman-street, for Mr. C. A. Newbold; rebuilding of the O Rare Ben Johnson public-house, New-street, for Messrs. Phillips & Marriott, Ltd.; alterations to the Fleur de Lis public-house, Smithford-street, for Messrs. Phillips & Marriott, Ltd.; two houses, Holbrooks-lane, for Mr. W. Houghton; fourteen houses and one house with shop, Bray's-lane, for Mr. G. Claridge; extension of hardening shop, Spon End, for the Coventry Chain Company, Ltd.; two houses, Harefield-road, for Mr. H. Whiteman; eight houses, Queen Mary's-road, for Mr. Clifton; six houses, Edmund-road, for Mr. G. H. Broad; house, Holbrooks-lane, for Mr. J. A. W. Clarke; six houses, Sawn-lane, for Mr. J. Isaac; two houses,

* See also our list of Competitions, Contracts, etc., on page 56.

RATES OF WAGES IN THE BUILDING TRADE.

THE following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

——	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9	9	—	9	7½	6½	6½	6½
Accrington	9½	9½	9	9	9	9	8½	6½	6½	6½
Altrincham	9½	10	10½	10	8½	9½	9	6	6	6
Ashton-under-Lyne	10½	10½	10	10	8½	9½	9½	6	6	6
Barnsley	9½	9½	9½	9½	9	8½	8	7	7	7
Barrow-in-Furness	9½	10	9½	9½	9	9	9½	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6	6	6
Bath	8	8	8½	8	7½	7½	7½	5½	5½	5½
Bedford	8	7½	7½	8½	—	8	6½	5	5	5
Birkenhead	11	11	11	11½	10	11	9½	7	7	7
Birmingham	10	10	10	10½	9	10½	9	7	7	7
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	9½	9½	9½	9½	6½	7	7
Blackpool	9½	9½	9½	9½	8½	8½	8½	6	6	6
Bolton	10	10½	10	10½	9½	10	9½	—	—	—
Bournemouth	8½	8½	8½	8½	8½	8½	8	6	6	6
Bradford	10	10	9	9½	9½	10	8½	7	7	7
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	8–9	8	8	—	—	—	—	—	—	—
Bristol	9½	9½	9½	9½	—	9½	9	6½	6½	6½
Burnley	9½	9½	9½	9½	8	9	8½	6½	6½	6½
Burton-on-Trent	9	9	9	9	8½	9	8½	6	6	6
Bury	10	10	10	9	9	10	9	6	6	6
Cambridge	9	8½	8½	9	9	9	7	5½	5½	5½
Canterbury	8½	8	8	10	—	8½–9	6½	5	5	5
Cardiff	9½	9½	9½	9½	9½	9½	8½	6½	6½	6½
Chatham	8	9	9	9	9	8½	7	6	6	6
Chelmsford	8	7½	8	9	—	7½	6½	5	5	5½
Cheltenham	8½	8½	8½	8½	—	8½	8	5½	5½	5½
Chester	9½	10	9½	9	9	9½	8½	5½	5½	5–5½
Chesterfield	8½	9	8	8	9	8½	7½	5½	5½	5½
Colchester	8	8	8	9	8	9	6	5	5	5½
Coventry	9	9½	9½	9½	9½	9½	8½	6½	6½	7
Crewe	8½	8	7½	9	8	7½–8	7½	5	5½	6
Darlington	9½	9½	9	9½	10	9	8½	6½	6½	6½
Derby	9½	9½	9	9	9	9	8	6½	6½	7
Doncaster	9	9	9	9	8½	9	8	6½	6½	6½
Dudley	8½	8½	8½	8½	8½	8	7½	5½	5½	5½
Durham	9	9	9	9	9½	9	8	6	6	6½
East Glamorgan and Monmouthshire Valleys	9	9	9	9	—	—	8	6½	6½	6½
Exeter	8	8	8	7½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7–7½	6½	6½	6½
Gloucester	8	8½	8½	8	8	8½	8	6	6	6
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9	9	8	8½	7	7	7
Great Yarmouth	7½	7½	7½	—	7½	7½	6	4½	4½	—
Halifax	9½	9½	9	8½	8½	9	8½	6½	6½	6½
Harrogate	9½	9	9	9	8	9	8½	6½	6½	6½
Hartlepools	9	10	9½	10	10	10	8½	7	7	7½
Hastings	8½	8	8	8½	8	8	7	6½	5½	5½–6
Hereford	8	8	7½	8½	8	7	6½	5	5	5
Huddersfield	9½	9½	9	9	10	9	8½	6½	6½	6½
Hull	9½	9½	9½	9½	9½	9½	8½	7	7	7
Ipswich	8½	8½	8½	9	8½	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	8½	8½	5½	6	6
Leamington Spa	9	8½	8½	8½	8½	8½	7½	5½	5½	5½
Leeds	10	10	10	10	9	9½	8	7	7	7
Leicester	9½	9½	9½	10½	9½	9½	9	7	7	7½
Lincoln	9	8½	8½	9	8	8½	8	6	5½	6
Liverpool	11	11	11	11	10½	10½	9½	6½	7	7
Llanelly	9½	9½	8½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	5½
Luton	9½	8½	8½	9	9	8½	7½	5½	5½	5½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	10	10½	10½	11	9½	10	9½	6½	6½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	8	8	6½	6½	6½
Middlesbrough	9	10	9½	10	10	10	8½	7	7	7½
Newcastle-on-Tyne	10	10	10	10	10	10	9	6½	6½	6½
Newport, Mon.	9	9	9	9	8½	9	8½	6½	6½	6½
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8	8½	8½	8½	8	8½	7	5½	5½	5½
Nottingham	10	9½	10	10½	9½	10	9	7	7	7½
Oldham	10½	10½	10	10	9	10	9½	6	7	7½
Oxford	9	8½	8½	8½	8	8½	7½	6	6	6
Plymouth	9	9	9	9	9	9	7½	6	6	6
Pontypridd	9	9	8½	9	9	9	8	6½	6½	6½
Portsmouth	9½	9½	9½	9½	—	8½	7½	7	7	7
Preston	10	10½	10	9½	9	10	9½	5½	6	6
Reading	8½	9	9	9½	—	9	7½	6	6	6
Rochdale	10	10½	10	9½	8½	9½	9	6½	6½	7
Rochester	8	9	9	9	9	8½	7	6	6	6
Rugby	8½	8½	8½	8½	8	9½	8½	5½	5½	5½
St. Albans	9	9	9	9–10	9	9–10	8	6½	6	6½
St. Helens	9	9½	10	9	9	9½	9½	6	6	6
Scarborough	8½	9	8½	8½	8	8	7½	6½	6½	6½
Sheffield	10½	9½	9½	9½	9½	9½	8½	6½	6½	6½
Shrewsbury	8½	8½	8½	8½	—	8½	7	5½	5½	5½
Southampton	8½	9½	9½	8	—	9½	8½	6½	6½	6½
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	9	9½	9½	9½	9	9½	9	6	6	6
South Shields	10	10	10	10	10	8½	9	6½	6½	6½
Stockport	10	10	9½	10	9	9½	8½	6	6½–7	7
Stockton-on-Tees	9	10	9½	10	10	10	9	7	7	7½
Stoke-on-Trent	9	9½	9	9	—	8½	8½	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	10	10	10	10	9½	9	9	6½	6½	7
Swansea	9	9	9	9	8½	9	8½	6	6	6
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Wakefield	9½	9½	8½	9½	8½	9	8	7	7	7
Walsall	9	8½	9	8½	8½	8½	7½	6½	5½	6½
Warrington	8½	9½	9½	10	8½	9½	8½	5½–6	6	6–6½
West Bromwich	9½	9½	9	9½	—	8½	7½	6½	6½	6½
Wigan	10	10½	9½	9½	9	9½	9½	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	9½	9½	10	8	10	8	6½	6½	6½
Worcester	8½	9	9	8½	8½	8½	7½	6	6	6
York	9½	9½	8½	9½	9½	8½	8	6½	6½	6½

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

North-street, for Mr. F. Alcock; eight houses, Welland-road, for Messrs. Gilbert & Griffin; six houses, Swan-lane, for Mrs. J. Isaac; twenty-three houses, Queen Mary's-road, for Mr. J. Isaac; seven houses, St. Margaret's-road, for Mr. J. Gardner.

Crompton.—Plans have been passed for eighteen houses at Provident Park, for the Crompton Co-operative Society.

Dolgelly.—Plans of a house on the Corsygedol Estate and a bungalow for Mr. Starley, near Barmouth, approved.

Doncaster.—Mr. J. Jarrett proposes developing four fields between Carr House-lane and the Low Pastures for building purposes.

Dublin.—The L.G.B. have held an inquiry into the application of the T.C. for sanction to expend £174,750 on housing schemes.

Dundee.—The T.C. propose erecting an electricity sub-station in Walton-street, at a cost of £6,500. Plans passed:—Arbroath-road and New-street, villa for Mr. Alex. Macdonald; Blackscroft, alteration on building for Mr. E. T. Tulloch; Carnegie-street, workshop for Mr. Stewart Ogilvit; Church-street, alteration on dwelling-house for Mr. J. B. Archer; Dalhousie-road, cottage for Miss Jessie Roberts; Erskine-street, alteration on shop for Dundee Eastern Co-operative Society, Ltd.; Liff-road, alteration on dwelling-house for Mr. Thomas Smith.

Durham.—Plans passed of bottling and packing room at Framwellgate Bridge, for Messrs. Colpitts.

Edinburgh.—Warrants granted by Dean of Guild Court:—Church Army labour and lodging homes, alterations, 28, Broughton-place; Mr. George Bennet Clark, alterations, 11, Charlotte-square; Sir Thomas Clouston, alterations, 26, Heriot-row; Mr. John Menzies, alterations, 23, Dewar Place-lane; Mr. Alexander Maitland, alterations, 6, Heriot-row; Mr. James Fyfe Smith, alterations, 52, Grange-road; Dr. William Russell, alterations, 3, Walker-street; General Billposting Company, Ltd., advertising hoarding, Portobello Station entrance; Edinburgh Merchant Company, deviation, 68, Queen-street; and Incorporated Edinburgh Dental Hospital and School, alterations, 31, Chambers-street.

Ely.—Mr. A. Allen proposes to build three cottages on Lynn-road.

Finchley.—Plans passed by U.D.C.:—Twenty shops with dwellings over, High-road, North Finchley, west side, at Highwood Estate, submitted by Mr. I. Rich; one house, Ravensdale-avenue, south side, submitted by Mr. L. A. Starling; billiard-room and conservatory, Holden-road, at Roseneath, submitted by Mr. G. Udloff; two houses, Woodberry-way, north side, submitted by Mr. R. Ellwood; two houses, Woodberry-way, south side, submitted by Mr. R. Ellwood; alterations, High-road, North Finchley, at the Swan and Pyramids, submitted by Messrs. Christie & Co.; four houses, Cornwall-avenue, south side, junction with Grove-avenue, submitted by Mr. W. Foster; two houses, Elm Park-road, Nos. 60 and 62, submitted by Mr. W. R. Lawrence; six houses, Finchley-way, south side, Brent Garden Village, submitted by the Brent Garden Village, Ltd.; and two houses, Woodberry-way, north side, submitted by Mr. R. Ellwood.

Foleshill.—Plans passed by U.D.C.:—Six streets, for Messrs. Kelly & Wootton, Little Heath, Foleshill; four houses, for Mr. C. W. Dawkins, Wood-street, Collycroft; four houses, for Messrs. Good & Sons, Holbrooks-lane, Foleshill; one house, for Mr. E. Pearson, Windmill-road, Foleshill; alterations and additions to houses, for Mr. W. Friswell, Astley-lane, Bedworth; motor-house and stores, for Mr. T. W. Lenton, King-street, Bedworth.

Harrogate.—The L.G.B. have held an inquiry into the application of the T.C. to borrow £6,300 for improvements at the Kursaal. The scheme is primarily to enlarge the stage and to provide increased and improved dressing-room accommodation. The proposed new stage will be 79 ft. wide and 46 ft. high with a working depth of 40 ft.

Haywards Heath.—The U.D.C. has received the sanction of the L.G.B. to the raising of loans for the purchase of land and provision of fencing for the new cemetery. The sum to be borrowed is £2,300.

Hendon.—Plans passed:—Shop with flats over, Edgware-road, Mr. H. D. Kruse; house, Park-avenue, Golder's Hill Estate, Mr. W. J. King; six houses, Dunstan-road, Golder's Green, Mr. C. W. Simmonds; house, Lyndhurst-avenue, Mill Hill, Mr. F. Parvin; house, Queen's-road, Hendon, Mr. A. W. Smyrk; house, The Parade, Golder's Green, Mr. T. P. Gray; fifty-seven houses, Gainsborough-gardens and Powis-gardens, the London Electric Railway Company; four houses, Booth-road, Colindale Estate, Mr. John Robinson; four houses, Finchley-road, Mr. E. G. Trobridge; motor-house, Flower-lane, Mill Hill, Mr. W. J. Newberry; elementary schools, Wessex-gardens, Golder's Green, the Hendon Education Committee; pair cottages, Hammers-lane, Mill Hill, the Trustees, Linen and Woollen Drapers' Homes; pair houses, Rodborough-road, Golder's Green, Mr. E. A. Cooper; ten houses, Llanvanor-road, Child's-hill, Mr. H. L. Evans; four houses, Woodlands, Leeside-crescent and Woodlands-crescent, Messrs. Haymills, Ltd.; six houses, Woodlands, Messrs. Haymills, Ltd.; two houses, Hillside-close, the Hampstead Heath Extension Tenants, Ltd.; two houses, Ravenscroft-avenue and Wentworth-road, Mr. W. H. Watts; eight houses, Blind-lane, Mr. A. Cook; seven shops with flats over, corner of Riding, Golder's Green, Mr. A. J. Edmondson; house, Ranulf-road, Golder's Green, Messrs. R. W. Hart & Son; twelve houses, Finchley-road, Mr. A. J. Reynolds.

Isle of Wight.—Plans approved by R.D.C.:—Mr. T. Scott, house, High-street, Wootton; Mr. B. J. Whitbread, house, High-street, Wootton; Mr. E. L. Smith, house, Locks-lane, Steyne-road, Bembridge; Mr. A. Hunt, pair houses, High-street, Whitwell.

Lancaster.—Plans passed:—Four dwelling-houses in Sibsey-street, for Messrs. J. N. & T. Grubb.

Liverpool.—At a cost of £226,500, the Mersey Docks and Harbour Board propose to erect a shed 500 yds. long by 50 yds. wide, and occupying a space of 15 acres, on the south quay of the new Gladstone Dock at Liverpool, with the necessary cranes and railway lines for handling cargo. The shed is to be a three-story building, and is a new feature at the Liverpool docks so far as it is to be set back from the quay so as to allow the space for a double set of railway lines.

Maidenhead.—Plans passed for additions to Boyn Holme for Capt. Pretyman.

Margate.—Plans passed:—Three houses, Dane-road, Mr. W. L. Bennett; one house, Westcliff-gardens, Mr. S. O. Eales; extension of steel staging and refreshment-rooms, Cliftonville foreshore, Mr. A. A. Whitehead; four houses, Victoria-avenue, Mr. A. A. Whitehead; additions, 38, Harold-road, Messrs. Reeve & Reeve; addition to Ashcroft, All Saints'-avenue, Mr. C. W. Adams; additions to Liberal Club, Hawley-square, W., Mr. W. L. Bennett; two flats and garage, St. Paul's-road, Mr. L. G. Matthews.

Montgomery.—Plans have been passed by the T.C. for the public institute which Mr. D Davies, M.P., has offered to present to the town.

Newcastle-on-Tyne.—The Housing Committee are recommending the T.C. to spend £25,000 on the erection of workmen's dwellings.

Newport.—Plan for the offices of the British Mannesmann Tube Company's new works have been submitted to the Works Committee of the T.C. and approved.

Norbury.—The Housing Committee of the L.C.C. have decided that none of the tenders opened during the Whitsuntide recess for the erection of 128 cottages on the Norbury Estate shall be accepted.

Pitsea.—The British Explosives Syndicate have been granted permission to erect seventeen additional danger buildings at their works.

Prestatyn.—Plans passed:—Detached house, for Mr. A. Morris, in Plas Tirion-avenue; two detached houses in Palmeira-gardens, for Mr. G. W. Hands; four semi-detached houses in Aber-road, Mr. G. W. Hands; detached house in Highbury-avenue, for Dr. A. S. Bowes; three shops in High-street, for Mr. C. M. Hopwood.

Rothwell.—Plans passed by U.D.C.:—Three houses in Oulton-lane, for Messrs. Barber & Newton; conversion of farmhouse at Ouslewell Green into two cottages, for Major Calverley; conversion of Spiritualist Church into a lock-up shop, for Mr. H. Lunn; thirteen dwelling-houses in Middleton-avenue, for Mr. F. Mitchell; and slaughter-house, for Mr. H. Asquith.

Ruthen.—The R.G. have decided to erect an infirmary, at a cost of £4,500.

Spennymoor.—Plans passed by U.D.C.:—House in North-road, for Mr. A. Welsh; house in North-road, for Mr. W. S. Gill; house in Park-Parade, for Mr. Noah Bennett; two houses in South-terrace, for Mr. J. A. Tighe.

Stafford.—Plans passed by R.D.C.:—Twenty workmen's cottages at Doxey, for Mr. J. W. Pearson, Oxford-gardens, Stafford.

Stockport.—The L.G.B. have issued an order authorising the extension of the nurses' home at the Stepping Hill Hospital, at a cost not exceeding £4,384.

Tredegar.—Mr. W. Harris, a Bargoed architect, has approached the U.D.C. and offered to build 240 houses on the site of the Tredegar estate within the next three years, on condition that the Council surrender their first claim on the land. The offer has been accepted. The Council have also decided to open negotiations with the Duke of Beaufort for the acquisition of a very desirable site at Nantybwch for the erection of fifty houses.

Wrexham.—Plans of houses to be erected on the land in Holt-road, agreed to be purchased from Sir Foster Cunliffe, has been adopted by the T.C., and it has been decided that forty-three houses, containing two or three bedrooms respectively, be erected as soon as practicable on a portion of the land.

GENERAL BUILDING NEWS.

SCHOOL, ST. PANCRAS, N.W.

The Harwood-street School, St. Pancras, N.W., is being enlarged under the direction of Mr. W. E. Riley, F.R.I.B.A., Superintending Architect to the London County Council. The general contractors are Messrs. McCormick & Sons, Northampton-street, N.

OIL WORKS, ERITH.

Extensive building operations are in progress in connection with the Erith Oil Works, Ltd., Erith. The original structure is being supplemented by several additional buildings for storage and refinery purposes. The architect is Mr. Percival M. Fraser, A.R.I.B.A., Newport, Lincoln's-inn, W.C. The general contractors are Messrs. Christiana & Neilson, Copenhagen; Messrs. Friday & Ling, Northend Works, Erith; and Messrs. Bovis, Ltd., Upper Berkeley-street, Portman-square, W. Messrs. Redpath, Brown, & Co., Ltd., East Greenwich, are supplying structural steelwork, and some of the storage tanks are by Messrs. Fraser & Chalmers, Erith.

BUSINESS PREMISES, SOUTH MOLTON-STREET, W.

A showroom and offices over are being erected for Messrs. Frodsham & Co., Ltd., New Bond-street, on a site in South Molton-street and Davies-street, W. The architect is Mr. Melville Seth Ward, F.R.I.B.A., Victoria-street, Westminster, and the general contractors are Messrs. John Marsland & Sons, York-street, Walworth, S.E. The steelwork is by Messrs. Powers & Deane, Ransomes, Ltd., Cubitt Town, E., and the asphalt by Messrs. Thomas Faldo & Co., Ltd., Effingham House, Arundel-street, W.C. The heating and hot-water supply is by Messrs. Freer, of Leicester; the electric lighting is by Messrs. Cecil Cooper & Co., Gloucester-road, Kensington; and the pavement lights are by Messrs. Hayward Brothers & Eckstein, Ltd., Union-street, Borough, S.E.

TRADE NEWS.

The directors of the London County and Westminster Bank, Ltd., have declared an interim dividend of 10½ per cent. for the half-year ending June 30.

Under the direction of Mr. W. M. Scott, architect, Linlithgow, the "Boyle" system of ventilation (natural), embracing Boyle's latest patent "air-pump" ventilators and air-inlets, has been applied to Blackbrae School.

Towards the latter end of our leader on "Domes" (issue of June 19) it is stated that, "By the assistance of cement and concrete it should be possible now to build a large dome which will be rainproof without the necessity of a lead covering. . . ." Mr. J. H. Kerner-Greenwood, of King's Lynn, writes: "Such domes have already been constructed in Pudloed concrete and cement with entirely satisfactory results. The domes of the Carnegie Library at Chorlton-cum-Hardy and the Chadderton Town Hall, Lancs, to mention but two, have been successfully treated by this method."

The West Boldon New Picture Theatre is being ventilated by means of Shorland's exhaust roof ventilators, electric fans, and special inlet ventilators, supplied by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

WESTMINSTER CITY COUNCIL.

AT the fortnightly sitting of the Westminster City Council on July 2 the following amongst other matters were dealt with:—

Proposed Housing Scheme.—The Westminster Guardians having decided to dispose of their interest in the workhouse, Poland-street, the Housing Committee reported that they had directed negotiations to be entered into with the Local Government Board and the Guardians as a preliminary step towards the preparation of a scheme for the erection of workmen's dwellings on the site.

Panelled Georgian Ceilings.—It was agreed that the Director of the Victoria and Albert Museum be informed that the Council were prepared to deposit at the Museum on loan one of the ceilings and one of the chimney-pieces from the premises acquired by them in connection with the Argyll-place improvement.

Subways under Oxford-street.—An application had been received from Messrs. Selfridge & Co., Ltd., for consent to the construction of two subways under Oxford-street for the connection of two blocks of premises. The proposed subways will have a diameter of 22 ft. each, and be divided into two stories, the upper forming promenades and showrooms and the lower stockrooms for goods. It was pointed out by the Highways Committee that the matter was wholly within the jurisdiction of the St. Marylebone Borough Council, but they considered the proposal was open to grave objection, and had so informed the Marylebone Council.

Sherwood-place.—The Works Committee reported that Mr. F. J. Wills, architect to the Strand Hotel, Ltd., owners of the Regent Palace Hotel, Sherwood-street, had intimated to the Council the company's intention to build over Sherwood-place, and they had inquired into the matter. Sherwood-place was a *cul-de-sac* out of the east side of Sherwood-street, a few doors from Brewer-street, and was approached through a narrow covered passage. The place was about 8 ft. 8 in. wide and about 42 ft. 6 in. long, and there were a gate and steps at the entrance. It contained five little houses and a doorway at the end leading to other premises. The Council had not repaired or cleansed the place, it was of no use to the public, and the loss of light and air, if it were built upon, would be negligible. They considered that the Council would not be successful in contending that Sherwood-place was a public highway.

FORTHCOMING SALE AT READING.

A large site of 31,000 ft. in area in Friar-street, Reading, is to be sold by auction on Thursday, July 16, at the Mart, Tokenhouse-yard, by Messrs. Farebrother, Ellis, & Co. The site is suitable for a drill hall, garage, or cinema theatre.

PATENTS.

APPLICATIONS PUBLISHED.*

13,257 of 1913.—Franz Watzke: Apparatus for heating buildings.

13,356 of 1913.—Alfred Ernest Wheeler: Systems of hot-water circulation.

13,941 of 1913.—Thomas Moore Kendrick: Securing of ventilating casings, grids, and the like, in the walls of buildings.

20,204 of 1913.—Lionel Henry Teale: Domestic fireplaces.

21,343 of 1913.—George William Sutcliffe: Latches for securing doors and the like.

24,918 of 1913.—James Farley: Low-pressure hot-water heating apparatus of the accelerated type.

27,572 of 1913.—Henry Samuel Algernon Warren and Francis Walter Smith: Internal lining or casing for damaged lavatory wash-basins, water-closets, and the like vessels.

1,211 of 1914.—Thomas Partridge, Arthur Partridge, and Joseph Austen Partridge: Glazing roofs, greenhouses, garden frames, and like structures.

2,336 of 1914.—Alexander Johnston and the North British Rubber Company, Ltd.: Floorings, pavings, and like coverings.

3,720 of 1914.—Jan Nesetril: Mixing devices for cement and fibrous materials.

3,785 of 1914.—Otto Wiedemann: Manufacture of wall coverings.

5,333 of 1914.—Edwin James Sadgrove: Automatic opening of trap doors, skylights, and the like.

5,460 of 1914. Alonzo Felton: Glass lights or windows and similar structures.

5,658 of 1914.—Carl Ruetz: Automatic device for starting and stopping the cutting apparatus in brick-cutting machines.

6,086 of 1914.—Johann Heinrich Jakob Bruning: Manufacture of built-up or several ply slabs or sheets of wood.

9,720 of 1914.—George Franklin Tripp: Domestic fireplaces and chimneys therefor.

FOREIGN AND COLONIAL.

New South Wales.—In Sydney and suburbs there has been good employment in the building and iron trades, but the supply of labour is for the most part sufficient. There is no demand for plasterers. Unskilled labourers are in excess of the demand, and are warned against going to Sydney.

Victoria.—The building trades in Victoria have been busy.

South Australia.—Most trades are fairly busy, especially the building and engineering trades; but there is very little demand for more labour.

New Zealand.—The conditions in the various trades have been fairly good, but the local supply of men is for the most part sufficient, except in the case of skilled plumbers. In prescribed districts no person may work as a sanitary plumber unless he has served six years as an apprentice or has been engaged in the trade for seven years, and is registered after examination.

South Africa.—There are numbers of men in the building trades out of work at Johannesburg. The demand for labour at the Cape is poor, especially in the building, engineering, and furniture trades. The supply of labour in Natal and the Orange Free State is sufficient.

Rhodesia.—Work for mechanics is highly paid, but intermittent, and living is expensive: there is no demand for unskilled labourers, as coloured natives are employed. The Chief Secretary at Salisbury warns Europeans against going into Rhodesia in search of employment, as there is no present unsupplied demand for labour, and many persons are in a destitute condition.

TRADE CATALOGUE.

We have received from Messrs. Simplex Concrete Piles, Ltd., Caxton House, Westminster, S.W., a booklet which contains various illustrations and particulars of some of the recent work executed on the Simplex system of concrete piling. The volume describes the general principles employed in the construction of these concrete piles, and among other practical advantages of this system is the considerable saving of time which is effected owing to the piles being driven and constructed by practically the same operation, no time being lost in casting piles some months before the actual driving commences.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk (*) are advertised in this number: Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointments, xxii.; Auction Sales, xxviii. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

***** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.**

Competitions.

JULY 9 — **Kilsyth.** — HOUSES.—The T.C. of Kilsyth propose to erect three tenements of dwelling-houses or twelve semi-detached one-story cottages. Architects are invited to submit competitive plans. Specification and conditions from the Burgh Surveyor, Mr. W. Mackay Lennox, Town Clerk, Kilsyth.

JULY 16.—**Middleton.**—TOWN HALL.—The Middleton Corporation invite competitive designs for a new Town Hall. Premiums, £100, £50, £20 respectively. See advertisement in issue of April 24, also particulars in issue of May 1.

JULY 23.—**East Elloe.**—COTTAGES.—The East Elloe R.D.C. are prepared to consider plans and appoint an architect in connection with the erection of cottages within their district. The fees to be paid will be 5 per cent. on the first £500 expended, and 2½ per cent. on the amount of all further work carried out. Mr. S. S. Mossop, Jun., Clerk to the Council, Holbeach.

JULY 24.—**Chapel-en-le-Frith.**—COTTAGES.—The Chapel-en-le-Frith R.D.C. invite competitive designs for cottages. Premiums, £10 10s., £5 5s. and £2 2s. See advertisement in issue of July 3.

JULY 25.—**Redhill.**—POLICE AND FIRE STATION.—The Reigate B.C. invite competitive designs for a new police and fire station. Three premiums are offered, viz., 40, 20, and 10 guineas. See advertisement in issue of June 5, also particulars in issue of June 19.

SEPTEMBER 7.—**London.**—SCHOOLS.—The L.C.C. invite architects to submit designs for two new schools. See advertisement and full particulars in issue of May 1.

SEPTEMBER 18.—**Glasgow.**—BUILDINGS.—The Corporation invite from architects competitive plans of buildings proposed to be erected at the north-west corner of Trongate and High-street. Premiums of £50, £30, and £25 respectively will be awarded to the authors of the designs adjudicated first, second, and third, in order of merit. Plan of the site, along with a copy of the terms and conditions of the competition, of Mr. J. Lindsay, Town Clerk, City-chambers, Glasgow. Deposit, £1 1s.

* OCTOBER 31.—**St. Helens.**—POLICE BUILDINGS AND FIRE STATION.—The St. Helens C.B. invite competitive designs for the above buildings. Premiums, £100 £50, and £25.

JANUARY 15, 1915.—COLLEGE MEMORIAL LECTURE HALL.—**Designs for the Alexander Thompson Travelling Studentship must be delivered by the above date.** See advertisement in issue of January 30.

* NO DATE.—**Southport.**—SCHOOL AND OFFICES.—The Southport E.C. invite competitive designs for a technical school and education offices.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JULY 13.—**Blackhill.**—VILLA.—Erection of villa in King's-road, Blackhill. Specification of Mr. J. Eltringham, architect, Blackhill.

JULY 13.—**Blackpool.**—CLEANING, ETC.—Cleaning, decoration, etc., of public schools for the Blackpool E.C. Specification of the Director of Education, Municipal-buildings, Blackpool.

JULY 13.—**Bromley.**—PAINTING.—For internal and external painting of three schools. Specifications at the office of the E.C., Bromley. Deposit, 10s. in each case.

JULY 13.—**Chard.**—COTTAGES.—Erection of block of four cottages at Combe St. Nicholas for the Chard R.D.C. Specifications of Messrs. Symes & Madge, architects, Chard.

JULY 13.—**Chipping Norton.**—FENCING.—Construction of substantial oak post and rail close-paled fence at the intended sewage disposal works, Charlbury, for the Chipping Norton R.D.C. Specifications of Mr. Richard Cooper, Lauriston House, Charlbury, Oxon.

JULY 13.—**Ebbw Vale.**—HOUSES.—Erection of 214 houses at Ebbw Vale, Mon., for the Ash Grove Building Club. The work will be let in four separate contracts as follows:—(1) Seventy-four houses; (2) fifty-four houses; (3) forty-eight houses; (4) thirty-eight houses. Specifications of Mr. Walter Rosser, architect and surveyor, Wilding's-chambers, Newbridge, Mon.

JULY 13.—**Edinburgh.**—CONVENIENCE, ETC.—Erection of a public convenience and scavengers' muster-room at Canonmills Bridge. Specification of Mr. A. H. Campbell, M.Inst.C.E., Burgh Engineer, Parliament-square.

JULY 13.—**Morley.**—PAINTING.—Painting (labour and tackle only) of the framework of two gasholders. Mr. Fred Thackray, Town Clerk, Town Hall, Morley

JULY 13.—**Portsmouth.**—PAINTING, ETC.—Removing glazed partition and refixing at New-road School; renovating Bramble-road School lodge and supplying and fixing stove. Specifications of Mr. A. H. Bone, Surveyor, Cambridge Junction, Portsmouth.

JULY 13.—**Romford.**—REPAIRS, ETC.—Execution of various repairs, painting, etc., to certain schools in the Romford district for the Essex E.C. Specifications of Mr. H. P. Winstanley, Clerk to District Sub-Committee, 71, South-street, Romford.

JULY 13.—**Shipley.**—PAINTING.—Cleaning, painting, varnishing, etc., required inside the Central, Crag-road, Otley-road, Shipley Church of England, and the Salt High Schools, and the infants' department of the Wood End School, Windhill. Specification of Mr. Walter Popplestone, Secretary of Education, Education Office, Saltaire-road, Shipley.

JULY 13.—**Warrington.**—PAINTING.—For inside painting and decorating at the Education Offices and Water Offices in Sankey-street. Specifications of the Borough Surveyor, Town Hall.

JULY 13.—**Willesden.**—PAINTING.—For the painting of public street arc lamp columns and feeder pillars in various parts of the district for the Willesden U.D.C. Specification from Mr. A. W. Blake, Electricity Office, Salusbury-road, Kilburn.

JULY 13.—**Winchester.**—PAINTING.—For painters' work required to be done to the elementary schools in the city. Specifications at the City Surveyor's Office, Guildhall, Winchester.

JULY 13.—**Ynysybwl.**—HOUSES.—Erection of thirty houses at Ynysybwl for the Twynglas Building Club, together with the formation of a 36-ft. road in front and a 12-ft. lane at the rear. Specification of Mr. E. Ivor Evans, architect, 55, Dunraven-street, Tonypandy.

JULY 14.—**Bingley.**—PAINTING.—Painting, colour-washing, etc., to be done at Crossflats Council School, Eldwick Council School, Wilsden Council School. Specifications of Mr. B. Leah, Education Office, Bingley.

JULY 14.—**Birmingham.**—PAINTING.—Painting of buildings, etc., at the Saltley Works of the Birmingham Tame and Rea District Drainage Board. Mr. John D. Watson, M.Inst.C.E., Engineer to the Board, Engineer's Office, Tyburn, Birmingham.

JULY 14.—**Carlisle.**—STORE.—For erection of workshop and store for Mr. Hodgkinson, London-road. Specifications of Mr. H. H. Hodgkinson, architect, 12, Lonsdale-street, Carlisle.

JULY 14.—**Coventry.**—PAINTING.—For painting various schools in the city for the Coventry E.C. Specification of Mr. Fredk. Horner, Secretary, Education Office, Coventry.

JULY 14.—**Edinburgh.**—ALTERATIONS.—Mason, joiner, plumber, plaster, and slater works for alterations, etc., at the Loanhead Hospital for the Midlothian C.C. Schedules from Mr. A. Murray Hardie, architect, 20, George-street, Edinburgh.

JULY 14.—**Peterhead.**—ADDITIONS, ETC.—Additions and alterations on farm steadings at the following farms:—North Auchmachar, Mr. John Penny, tenant; Backhill, Auchmachar, Mr. John Ross, tenant; Fortrie, Longside, Mr. Wm. Third, tenant. Specifications of Mr. R. G. A. Duguid, architect, Peterhead.

JULY 14.—**Portsmouth.**—PAINTING.—For painting, etc., the inside of the Municipal College for the E.C. Specification of the surveyor, Mr. A. H. Bone, Cambridge Junction, Portsmouth.

JULY 14.—**Rhondda.**—PAINTING, ETC.—For papering, painting, etc., to be done at Ivor Hael Hotel, Llwynypia; Hollybush Hotel, Hopkinstown; Windsor Hotel, Merthyr Vale; Alexandra Hotel, Pentre, for Messrs. Dd. John & Co., Ltd., Pentre. Specification of Mr. W. D. Morgan, M.S.A., architect, 194, Ystrad-road, Pentre, Rhondda.

JULY 14.—**Southall-Norwood.**—VARIOUS.—(1) Road works; (2) removal of old buildings and alterations to the Manor House, for the Southall-Norwood U.D.C. Quantities of Mr. Reginald Brown, Engineer and Surveyor to the Council, Town Hall, Southall.

JULY 15.—**Bradford.**—PAINTING.—Painters' work required to be done at the several parks, cemeteries, and recreation grounds. Specifications of the City Architect, Town Hall, Bradford.

JULY 15.—**Clitheroe.**—COTTAGES.—Erection of twenty-six cottages in Brownlow-street for the Corporation. Specifications of Mr. A. R. Bleasard, Borough Engineer. Deposit, £1 1s.

JULY 15.—**Formby, etc.**—FOUNDATIONS, SUBSTATION, ETC.—(1) Foundations, etc., for the extension of boiler-house at Electric Power Station, Formby; (2) erection of electric substation and battery house at Radcliffe; (3) earthwork, etc., for exchange sidings at Goole for the Lancashire and Yorkshire Railway Company. Quantities at the Engineer's Office, Hunts Bank, Manchester.

JULY 15.—**Leeds.**—ALTERATIONS, ETC.—For mason's, plasterer's, joiner's, pavior's, and painting work, etc., at the Town Hall, Municipal-buildings, Judges'-lodgings, and Pearl-chambers, Leeds. Quantities of Mr. W. T. Lancashire, City Engineer, Municipal-buildings, Leeds.

JULY 15.—**Leeds.**—WALLS.—Boundary walls, palisading, etc., at the Ellerby-lane Council School. Quantities of Mr. James Graham, Secretary for Education, Education Offices, Leeds.

JULY 15.—**Tonypandy.**—BUSINESS PREMISES.—Rebuilding of business premises in Dunraven-street, Tonypandy. Specifications of Mr. R. S. Griffiths, architect and surveyor, Tonypandy.

JULY 15.—**Truro and Falmouth.**—PAINTING, ETC.—For painting various schools in Truro and Falmouth district for the Cornwall E.C. Specification of Mr. A. A. Clinnick, District Clerk, Education Office, Truro.

JULY 15.—**Wigan.**—PAINTING.—For painting of borough courts and market hall. Specification of Mr. A. T. Gooseman, Borough Engineer, King-street West.

JULY 16.—**Chelmsford.**—COTTAGE.—Erection of a cottage adjoining stables and depôt in Manor-road for the Corporation. Particulars at the Borough Engineer's Office.

JULY 16.—**Weymouth.**—STORES.—For construction of stores and incidental works at Sunnybank Pumping Station. Particulars of Mr. J. K. S. Harris, Borough Surveyor, Municipal Offices, Weymouth.

JULY 17.—**Gillingham.**—PAINTING.—Painting, colour-washing, etc., at various schools. Specification of Mr. Andrew Johns, 4, Gardiner-street, Gillingham, Kent.

JULY 17.—**Stapleton.**—FARMHOUSE.—Erection of farmhouse at Gibbs Hill, Stapleton, for the trustees of Mr. J. Kyle. Specifications of Messrs. Wright, Brown, & Strong, solicitors, Carlisle.

JULY 17.—**Thornbury.**—COTTAGES.—Erection of eight workmen's dwellings at Charfield for the Thornbury R.D.C. Specifications of Mr. Davies, Surveyor, Thornbury. Deposit, £1.

JULY 18.—**Cardiff.**—VARIOUS.—(1) Cement and tile work, hospital corridors, city lodge; (2) cement and tile work, kitchen and dining-hall, City Lodge; (3) conversion of old stores, City Lodge; (4) repairs and renovations, 145 and 147, Clive-road, and 433 and 451, Cowbridge-road, for the B.G. Forms of tender of Mr. Arthur J. Harris, Clerk, Union Offices, Queen's-chambers, Cardiff.

JULY 18.—**Hull.**—VILLAS.—Erection of two villas, each to accommodate forty patients, at the Hull City Asylum, Willerby. Quantities of Mr. Joseph H. Hirst, City Architect, Guildhall, Hull. Deposit, £2 2s

* JULY 18.—**Kingston-on-Thames.**—REPAIRS AND PAINTING.—The Guardians of the Kingston Union invite tenders for repairs and painting at Infirmary, Kingston-on-Thames, and Children's Homes, New Malden, Surrey.

JULY 18.—**Nuneaton.**—CELLS.—Erection of additional cells at police-station for the Warwickshire C.C. Particulars from Mr. John Willmot, County Surveyor, 6, Waterloo-street, Birmingham.

* JULY 18.—**Redhill.**—INFIRMARY BLOCK.—The Reigate Guardians invite tenders for erection of a new infirmary block.

* JULY 20.—**Barnet.**—ENLARGEMENT OF SCHOOL.—The Hertfordshire C.C. invite tenders for enlargement of Byng-road School.

* JULY 20.—**Denton.**—SUMMER REPAIRS, ETC.—The Kent E.C. invite tenders for summer repairs to Council school.

* JULY 20.—**Herne Bay.**—SUMMER REPAIRS, ETC.—The Kent E.C. invite tenders for summer repairs, etc., to Council school.

JULY 20.—**Monmouthshire.**—PAINTING.—The Monmouthshire E.C. invite tenders for painting, etc., about thirty schools. Specifications of Mr. J. Bain, F.R.I.B.A., County Council Offices, Newport.

* JULY 20.—**Near Liverpool.**—FENCING.—The Board of Control invite tenders for erection of fencing.

JULY 20.—**Newport.**—PAINTING, ETC.—Painting and repairs at Gatten Council schools and the secondary school, and sliding partition at East Cowes School for the Isle of Wight C.C. Specifications of Mr. S. R. Cocks, St. Thomas's-street, Ryde.

JULY 20.—**Preston.**—OFFICES, ETC.—Erection of market offices, weighbridges, conveniences, etc., in Birley-street and Earl-street, Preston. Quantities of the Borough Surveyor, Town Hall, Preston. Deposit, £1 1s.

* JULY 20.—**Southborough.**—SUMMER REPAIRS, ETC.—The Kent E.C. invite tenders for summer repairs to Council school.

JULY 20.—**Stirling.**—HOSPITAL.—Various trades in erection of reception hospital at Larbert Asylum for the Stirling District Board of Control. Quantities of Messrs. A. & W. Black, architects, Falkirk. Deposit, £1 1s.

[Those with an asterisk (*) are advertised in this issue.]

BUILDING, etc.—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in

* JULY 20.—**Various Towns.**—BUILDING WORKS.—The Metropolitan Asylums Board invite tenders for carrying out certain building works at various institutions.

* JULY 20.—**Various Towns.**—CLEANING AND PAINTING.—The Metropolitan Asylums Board invite tenders for cleaning and painting work at various institutions.

JULY 21.—**Guildford.**—BRIDGES.—Removal of the three bridges known as Cartbridge, Round Hole, and Hatch Bridge, in the parish of Send and Ripley, and the construction of brick and concrete bridges. Quantities to the Council's Engineer, Mr. John Anstee, District Council Offices, Commercial-road, Guildford. Deposit, £2 2s.

* JULY 21.—**Victoria Park.**—CLEANING, PAINTING, ETC.—The Bethnal Green Guardians invite tenders for proposed painting and cleaning.

JULY 21.—**Wincanton.**—HOUSING.—Erection of four houses for the working classes in the parish of North Cheriton, together with certain drainage and other work, for the Wincanton R.D.C. Specification of the architects, Messrs. Petter & Warren, Church-street, Yeovil. Deposit, £1 1s.

JULY 22.—**Great Yarmouth.**—PAINTING.—Outside painting of Stradbroke-road School, Gorleston, and Nelson School, St. Peter's-road, Great Yarmouth. Also for cleaning and colouring the inside walls, etc., of Northgate, St. Nicholas', Nelson Girls', St. Peter's, and St. John's Schools, and Manual Work Centres at Rodney-road, Great Yarmouth, and Baker-street, Gorleston. Specifications of the Borough Surveyor, Town Hall, Great Yarmouth.

JULY 22.—**Great Yarmouth.**—SCHOOL, ETC.—Erection of an elementary school for 1,122 children at Hamilton-road, Newtown, Great Yarmouth. Also for alterations to school buildings at Cobholm Island. Quantities of the Borough Surveyor, Town Hall, Great Yarmouth.

* JULY 22.—**Wandsworth.**—ALTERATIONS AND ADDITIONS.—The Wandsworth Guardians invite tenders for alterations and additions to the Infirmary.

JULY 23.—**Blaina.**—HOUSES.—(1) Erection of 101 houses in Part-street, Blaina, and (2) the necessary roads in connection therewith, for the U.D.C. of Nantyglo and Blaina. Forms of tender of the Council's Surveyor, Mr. W. J. Davies, Blaina. Deposit, £5.

* JULY 23.—**Fulham.**—PAINTING, ETC.—The Fulham Guardians invite tenders for painting and repairs.

* JULY 23.—**Islington.**—WHITEWASHING, ETC.—The Islington Guardians invite tenders for whitewashing and cleaning work.

JULY 23.—**Preston.**—PAINTING.—Painting of outside of the County Asylum, Whittingham, Preston. Specifications of Mr. W. N. Baldwin, Clerk and Steward.

* JULY 23.—**West Ham.**—HOUSES, ETC.—The Port of London Authority invite tenders for erection of houses and works connected therewith.

* JULY 24.—**Merton.**—CART AND STORE SHED.—The Merton and Morden U.D.C. invite tenders for erection of a cart and store shed.

JULY 25.—**St. Martins.**—ENLARGEMENT.—Enlargement and alteration of the school at St. Martins. Quantities of Mr. Spaull, The Gables, Oswestry.

No DATE.—**Exeter.**—ADDITIONS.—Erection of a new nurses' block at the Royal Devon and Exeter Hospital, Exeter. Quantities of Messrs. E. H. Harbottle & Son, architects, County-chambers, Exeter. Deposit, £3 3s.

No DATE.—**Fleur de Lys.**—MOTOR GARAGE.—Erection of a motor garage at Fleur de Lys. Names to the South Wales Transport Company, Ltd., 2, Rutland-street, Swansea.

No DATE.—**Pontardawe.**—HOUSES.—Erection of two houses at Pontardawe for Mr. John Davies, Pontardawe. Specification of Mr. J. Cook Rees, M.S.A., Parade-chambers, Neath.

No DATE.—**Salford.**—PAINTING.—For painting the street lamps. Particulars of the Superintendent of the Cleansing Department, Wilburn-street, Salford.

No DATE.—**Shepsted.**—RENOVATION.—Renovation of the church tower and spire by builders who must have a previous knowledge of this class of work. Particulars to Mr. H. E. Noel, Hotel-street-chambers, Leicester.

No DATE.—**Soughton.**—PAINTING.—For painting, etc., of the C.M. chapel and two houses. Specification of Mr. J. E. Jones, Cartrefle, Soughton.

No DATE.—**Wigan.**—HOUSES.—Erection of twenty semi-detached houses at Standish Garden Village. Particulars of the architects, Messrs. W. B. Johnson & Son, 31, King-street, Wigan.

FURNITURE, MATERIALS, etc.

JULY 13.—**Bromley.**—ROAD MATERIAL.—For the supply to the T.C. of 3,500 yds. of broken stone. Forms of tender of Mr. F. H. Norman, Town Clerk, Municipal Offices, Bromley. Deposit, 10s.

JULY 13.—**Romford.**—ROAD MATERIAL.—Supply to the R.D.C. of 828 tons broken to 2-in. cube; 552 tons broken to 1½-in. cube; and 113 tons broken to ¾-in. cube. Tender from Mr. George Lapwood, Highway Surveyor.

JULY 14.—**Billinge.**—PIPES, ETC.—Cast-iron pipes, galvanised water tubing, valves, etc., granite macadam, copper and lead slag, and seconds earthenware pipes. Particulars of the Surveyor, Council Offices, Billinge.

No DATE.—**Bradford.**—GRANITE PAVING SETTS.—Supply of about 3,500 sq. yds. granite sett paving, 4-in. cubes, nonslippery. Mr. Bentley, 11, Horton Grange-road, Bradford.

ENGINEERING, IRON, AND STEEL.

JULY 13.—**Battersea.**—For triple-expansion steam-pumping engine, Battersea. Erection, completion, and working at the Battersea Pumping Station of the Metropolitan Water Board. Specifications of the Engineer, Savoy-court, Strand, London, W.C. Deposit, £2 2s.

JULY 13.—**Carstairs.**—SIGNAL BRIDGES.—Providing and erection of three signal bridges over the railway at Carstairs for the Caledonian Railway Company. Schedule of the Company's Engineer, Buchanan-street Station, Glasgow. Deposit, £2 2s.

JULY 13.—**Salford.**—FOUNDATIONS.—Steel and concrete foundations for 5,000 k.w. turbo-alternator. Particulars from the Borough Electrical Engineer, Electricity Works, Frederick-road, Pendleton.

JULY 15.—**India.**—BOLTS, WIRE, ETC.—Supply and delivery of galvanised eye and straining bolts and strand wire and fencing for the East Indian Railway Company. Mr. C. W. Young, Secretary, Nicholas-lane, London, E.C.

JULY 15.—**Shoreham.**—REPAIR OF SLUICES.—Renewal and repair of timber sluice doors and wing walls in the River Adur, near the Norfolk Bridge, Shoreham-by-Sea, Sussex, for the East Lancing Sea Defence Commissioners. Specification of Messrs. R. B. Grantham & Son, Civil Engineers, 5, Little College-street, Westminster Abbey, S.W. Deposit, £1 1s.

JULY 16.—**Battersea.**—STEEL ROOFS.—Supply and erection of the following steel and iron work, etc., at the Battersea Works of the Metropolitan Water Board:—Boiler-house roof, coal-bunker and roof, meter shop roof, and fitting shop roof. Specifications of the Engineer, Savoy-court, Strand, London, W.C. Deposit, £2 2s.

JULY 16.—**Ramsbottom.**—SLUDGE PUMP.—Erection of one electrically-driven sluge pump, with motor, wiring, counter-shafts, gearing, etc., complete, for the Ramsbottom U.D.C. Specification of Messrs. James Diggle & Son, Civil Engineers, Hind Hill-street, Heywood, Lancashire. Deposit, £2.

JULY 17.—**Durham.**—BRIDGE.—Widening of Dent Burn Bridge, situate at South Church, near Bishop Auckland, and also for the supply and erction of steelwork for a light footbridge (span 43 ft.) over the cutting at Ferryhill, for the Durham C.C. Quantities of Mr. William Crozier, A.M.Inst.C.E., County Surveyor's Offices, Shire Hall, Durham.

* JULY 20.—**Dartford (Kent).**—CALORIFIERS.—The Metropolitan Asylums Board invite tenders for (*a*) new calorifiers, with pipine connections, etc., at Orchard Hospital, near Dartford, and (*b*) additional fire valves, etc., in six staff homes at Southern (Lower) Hospital, near Dartford.

ROAD, SANITARY, AND WATER WORKS.

JULY 13.—**Clayton.**—ASPHALTING.—For asphalting at Clayton Council School. Specifications of Mr. B. Leah, Education Office, Bingley.

JULY 13.—**Warblington.**—LEVELLING, ETC.—Levelling and draining with agricultural drain pipes the recreation ground in the Horndean-road, Emsworth, containing a superficial area of about 7 acres, for the Warblington U.D.C. Specifications of the District Surveyor, North-street, Emsworth.

JULY 13.—**Whitley.**—ROADS.—(*a*) Hill Heads-road widening, construction of sewer, kerbing, and footpaths, etc.; (*b*) construction of carriageway with Durax paving laid with machine-cut granite cubes; (*c*) housing scheme, Hill Heads, completion of carriageway and footways to streets. Quantities of Mr. A. J. Rousell, A.M.Inst.C.E., the Council's Surveyor, Council Offices, Whitley Bay.

JULY 14.—**Samford.**—WATER MAIN.—Providing and laying about 2,000 yds. of 4-in. cast-iron water main in the parish of Shotley, for the Samford R.D.C. Specification of Mr. H. J. Wright, Architect, 4, Museum-street, Ipswich.

JULY 14.—**Tottenham.**—STREET WORKS.—Making-up of part of South-grove. Quantities of Mr. W. H. Prescott, Engineer, Town Hall, Tottenham. Deposit, £5.

JULY 14.—**Walton-on-Thames.**—SEWERAGE WORKS.—Construction of about 1,136 lin. yds. of 9-in. cast-iron pipe sewer and 990 lin. yds. of 9-in. glazed stoneware pipe sewer, together with manholes and other appurtenant works, for the Walton-upon-Thames U.D.C. Quantities of Mr. R. Wilds, Surveyor to the Council, Council Offices, Walton-on-Thames. Deposit, £1 1s.

JULY 15.—**Conway.**—ROADS.—Construction of length of road between Broad-street and Victoria-drive. Specification of Mr. F. A. Delamotte, Borough Engineer, Municipal Offices, Conway. Deposit, £1 1s.

JULY 15.—**Exmouth.**—WATERWORKS.—Supply of pipes and laying of same in connection with the duplication of pipe line from Quentance to Knowle-hill, for the Exmouth U.D.C. Quantities of Mr. Samuel Hutton, Engineer and Surveyor, Council Offices, Exmouth.

JULY 15.—**Market Bosworth.**—SEWERAGE WORKS.—Providing and laying about 240 yds. of 6-in. earthenware socket pipe sewer together with manholes, etc., for the Market Bosworth R.D.C. Specifications of Mr. W. M. Sykes, Surveyor to the Council, 152, Melbourne-road, Ibstock.

JULY 15.—**Preston.**—STREET WORKS.—Making-up back roads between Holmrook-road and Bullfinch-street for the T.C. Quantities of the Borough Surveyor, Town Hall, Preston.

JULY 15.—**Wanstead.**—ROADS.—Improvements in Centre-road:—(*a*) Widening, channelling, surface draining, etc.; (*b*) resurfacing the whole carriageway with asphalt-macadam, for the Wanstead U.D.C. Quantities at the Council's Offices, Wanstead, N.E. (Surveyor's Department).

JULY 18.—**Romford.**—SEWER, ETC.—Construction of about 500 ft. of 6-in. stoneware pipe sewer in Balgores-lane, Squirrels Heath, for the Romford R.D.C.; also for the making-up of parts of Ronald-road and Woodlands-road, Harold Wood, in the parish of Hornchurch. Particulars of the Surveyor, Mr. W. J. Grant, 16a, South-street, Romford.

* JULY 20.—**Carshalton.**—TAR PAVING.—The Metropolitan Asylums Board invite tenders for repairing and tar-dressing roads.

JULY 20.—**Haltwhistle.**—SEWAGE DISPOSAL.—Laying of about 2,000 yds. of 15-in., 12-in., and 6-in. sewers, and the construction of storm water and other tanks, bacteria and sludge beds, etc., for the Haltwhistle R.D.C. Quantities of the Engineer, Mr. J. E. Parker, A.M.Inst.C.E., Post Office-chambers, Newcastle-on-Tyne. Deposit, £1 1s.

JULY 20.—**Newton Abbot.**—WATER WORKS.—Construction of a storage reservoir to hold about 55,000 gallons on Hayton Down, providing and laying about 9,300 yds. of 5-in., 4-in., and 3-in. cast-iron water mains, etc., for the Newton Abbot R.D.C. Specifications of the Engineer, Mr. Samuel Segar, Union-street, Newton Abbot. Deposit, £2 2s.

JULY 22.—**Denton.**—SEWER.—Construction of about 1,000 yds. of 12-in. stoneware pipe sewer, partly in tunnel, and other works, in Thornley-lane and Gorton-road, Denton. Specifications of the Surveyor to the Council, Town Hall, Denton. Deposit, £1 1s.

JULY 22.—**Lanchester.**—STREET WORKS.—Making-up various streets for the Lanchester R.D.C. Quantities of the Highway Surveyor, Lanchester.

* JULY 29.—**Colchester.**—WOOD BLOCK PAVING.—The Colchester B.C. invite tenders for laying of about 10,000 sq. yds. wood block paving.

* AUGUST 13.—**Fleet.**—SEWAGE AND SEWERAGE DISPOSAL WORKS.—The Fleet U.D.C. invite tenders for construction of sewerage and sewage disposal works.

Public Appointments.

* JULY 15.—SESSIONAL TEACHER OF QUANTITY SURVEYING AND LAND SURVEYING.—The L.C.C. invite applications for above post at School of Building, Ferndale-road, Clapham, S.W. Salary, £175 a session.

* JULY 16.—ARCHITECT'S ASSISTANT.—The Leicestershire C.C. invite applications for the above post. Salary, £150 per annum.

* JULY 18.—MANUAL WORK INSTRUCTOR.—The Willesden E.C. invite applications for above post. Commencing salary, £100 per annum.

Auction Sales.

* JULY 16.—**Garratt-lane.**—Mr. H. Griffin will sell by auction, at 235, Lavender-hill, S.W., freehold building land.

* JULY 18.—**Tilbury (Essex).**—Messrs. Balls & Balls will sell by auction, at Lion Hotel, Cambridge, a freehold field of arable land.

* JULY 20.—**South Croydon.**—Messrs. Hooker & Webb will sell, on the site, building materials.

* JULY 21.—**Edgware.**—Messrs. Walton & Lee will sell by auction, at 20, Hanover-square, building land.

* JULY 21.—**Ponders End.**—Messrs. Daniel Smith, Son, & Oakley announce the postponement of the above sale.

* JULY 21.—**Wallington.**—Messrs. Knight, Frank, & Rutley will sell by auction, at 20, Hanover-square, W., the freehold of Elm-grove Estate.

* JULY 22.—**Brockley.**—Messrs. Humphreys, Skitt, & Co. will sell by auction, at the Amersham Hotel, freehold building land.

* JULY 22.—**Mitcham.**—Messrs. L. T. Davey & Edwin Evans & Sons will sell by auction, at Buck's Head, Mitcham, freehold building plots.

* JULY 22.—**Slough.**—Mr. Mason will sell by auction, at the Mart, a freehold estate.

* JULY 29.—**Westminster.**—Messrs. Fuller, Horsey, Sons, & Cassell will sell by auction, on the premises, plant of various kinds.

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to THE BUILDER LTD., and not to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples, sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

[Those with an asterisk (*) are advertised in this issue.]

PRICES CURRENT OF MATERIALS.

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.	£	s.	d.
Best Stocks	1	16	6
Picked Stocks for Facings	2	10	0

Per 1000, Delivered at Railway Depôt.

	£	s.	d.		£	s.	d.
Flettons	1	14	0	Best Blue Pressed Staffordshire	3	15	0
Best Fareham Red	3	12	0	Do. Bullnose	4	0	0
Best Red Pressed Ruabon Facing	5	0	0	Best Stourbridge Fire Bricks	4	0	0

GLAZED BRICKS—

Best White, Ivory, and Salt Glazed Stretchers	12	7	6	Double Headers One Side and two Ends	14	17	6
Headers	11	17	6		18	17	6
Quoins, Bullnose and 4½ in. Flats	15	17	6	Two Sides and one End	19	17	6
D'ble Str'ch'rs	17	17	6	Splays and Squints	17	7	6

Second Quality £1 10s. per 1000 less than best.

	£	s.	d.	
Thames and Pit Sand		7	0	per yard, delivered.
Thames Ballast		5	9	„ „
Best Portland Cement	37	0		per ton, „
Best Ground Blue Lias Lime	20	0		„ „

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 14s. 0d. per yard, delivered.
Stourbridge Fireclay in sacks 27s. 0d. per ton, at rly. dpt.

STONE.

Per Ft. Cube.

	s.	d.
BATH STONE—delivered on road waggons, Paddington Depôt	1	7½
Do. do. delivered on road waggons, Nine Elms Depôt	1	9½
PORTLAND STONE (20 ft. average)—		
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2	4½
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2	6½

Per Ft. Cube, delivered at Railway Depôt.

	s.	d.		s.	d.
Ancaster in blocks	1	10	Closeburn Red Freestone	2	0
Beer in blocks	1	6	Red Mansfield Freestone	2	4
Greenshill in blocks	1	10	Talacre & Gwespyr Stone	2	4
Darley Dale in blocks	2	4			
Red Corsehill in blocks	2	3			

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s.	d.
Scappled random blocks	2	10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	2	8
6 in. rubbed two sides ditto, ditto	2	6
3 in. sawn two sides slabs (random sizes)	0	11½
2 in. to 2½ in. sawn one side slabs (random sizes)	0	7
½ in. to 2 in. ditto, ditto	0	6

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.	s.	d.
Scappled random blocks	3	0

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landing to sizes (under 40 ft. super.)	2	8
6 in. rubbed two sides ditto	3	0
3 in. sawn two sides slabs (random sizes)	1	2
2 in. self-faced random flags	0	5

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£	s.	d.	In. In.	£	s.	d.
20 x 10 best blue Bangor	13	2	6	20 x 10 best Eureka unfading green	15	17	6
20 x 12 ditto	13	17	6	20 x 12 ditto	18	7	6
20 x 10 1st q'lity ditto	13	0	0	18 x 10 ditto	13	5	0
20 x 12 ditto	13	15	0	16 x 8 ditto	10	5	0
16 x 8 ditto	7	5	0	20 x 10 permanent green	11	12	6
22 x 10 best blue Portmadoc	12	12	6	18 x 10 ditto	9	12	6
16 x 8 ditto	6	12	6	16 x 8 ditto	6	12	6

TILES.

At Railway Depôt.

	s.	d.		s.	d.
Best plain red roofing (per 1000)	42	0	Best "Hartshill" brand, plain sand-faced (per 1000)	45	0
Hip and Valley (per doz.)	3	7	Do. pressed (per 1000)	42	6
Best Broseley (per 1000)	50	0	Do. Ornamental (per 1000)	47	6
Do. Ornamental (per 1000)	52	6	Hip (per doz.)	4	0
Hip and Valley (per doz.)	4	0	Valley (per doz)	3	6
Best Ruabon red, brown, or brindle (Edw'ds) (pr 1000)	57	6	Staffords. (Hanley) Reds or Brindled (per 1000)	42	6
Do. Ornamental (per 1000)	60	0	Hand-made sand-faced (per 1000)	45	0
Hip (per doz.)	4	0	Hip (per doz.)	4	0
Valley (per doz)	3	0	Valley (per doz)	3	6

WOOD.

BUILDING WOOD.	At per standard. £	s.	d.	£	s.	d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	15	0	0	16	10	0
Deals: best 3 in. by 9 in.	15	0	0	16	0	0

WOOD (*Continued*).

BUILDING WOOD.	At per standard. £	s.	d.	£	s.	d.
Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	12	10	0	13	10	0
Battens: best 2½ by 6 and 3 by 6	0	10	0	less than 7 in. and 8 in.		
Deals: seconds	1	0	0	less than best		
Battens: seconds	0	10	0	„ „		
2 in. by 4 in. and 2 in. by 6 in.	11	10	0	12	10	0
2 in. by 4½ in. and 2 in. by 5 in.	10	10	0	11	10	0
Foreign Sawn Board—						
1 in. and 1½ in. by 7 in.	0	10	0	more than battens.		
¾ in.	1	0	0	„ „		
Fir timber: best middling Danzig or Memel (average specification)	At per load of 50 ft. 5	0	0	6	5	0
Seconds	4	10	0	5	0	0
Small timber (8 in. to 10 in.)	3	17	6	4	0	0
Small timber (6 in. to 8 in.)	3	5	0	3	10	0
Swedish balks	2	12	6	3	0	0
Pitch-pine timber (30 ft. average)	7	0	0	8	0	0

JOINERS' WOOD.	At per standard. £	s.	d.	£	s.	d.
White Sea: first yellow deals, 3 in. by 11 in.	26	0	0	27	0	0
3 in. by 9 in.	24	0	0	25	0	0
Battens, 2½ in. and 3 in. by 7 in.	18	10	0	19	10	0
Second yellow deals, 3 in. by 11 in.	21	10	0	22	10	0
Do. 3 in. by 9 in.	20	0	0	21	0	0
Battens, 2½ in. and 3 in. by 7 in.	15	0	0	16	0	0
Third yellow deals, 3 in. by 11 in. and 9 in.	16	0	0	17	0	0
Battens, 2½ in. and 3 in. by 7 in.	14	0	0	15	0	0
Petersburg: first yellow deals, 3 in. by 11 in.	23	0	0	24	0	0
Do. 3 in. by 9 in.	20	0	0	21	0	0
Battens	15	0	0	16	0	0
Second yellow deals, 3 in. by 11 in.	17	10	0	18	10	0
Do. 3 in. by 9 in.	16	0	0	17	0	0
Battens	12	10	0	13	10	0
Third yellow deals, 3 in. by 11 in.	14	0	0	15	0	0
Do. 3 in. by 9 in.	13	10	0	14	10	0
Battens	11	10	0	12	10	0
White Sea and Petersburg— First white deals, 3 in. by 11 in.	16	10	0	17	10	0
First white deals, 3 in. by 9 in.	14	10	0	15	10	0
Battens	13	0	0	13	10	0
Second white deals, 3 in. by 11 in.	14	10	0	15	10	0
Second white deals, 3 in. by 9 in.	13	0	0	14	0	0
Battens	12	0	0	12	10	0
Pitch-pine: deals	28	0	0	30	0	0
Under 2 in. thick extra	0	10	0	1	0	0
Columbian or Oregon Pine, best quality	24	0	0	26	10	0
Yellow Pine—First, regular sizes	50	0	0	upwards.		
Oddments	35	0	0	„		
Seconds, regular sizes	36	0	0	„		
Oddments	31	0	0	„		
Kauri Pine—Planks per ft. cube	0	6	6	0	7	6
Danzig and Stettin Oak Logs— Large, per ft. cube	0	3	0	0	3	9
Small „ „	0	2	6	0	3	0
Wainscot Oak Logs, per ft. cube	0	8	0	0	10	0
Dry Wainscot Oak, per ft. super. as inch	0	0	10	0	1	2
¼ in. do. do.	0	0	9	0	1	0
Dry Mahogany — Honduras, Tabasco, per ft. super. as inch	0	0	10	0	1	3
Selected, Figury, per ft. super. as inch	0	1	6	0	2	6
Cuba Mahogany	0	1	4	0	2	6
Dry Walnut, American, per ft. super. as inch	0	0	10	upwards. 0	1	2
French, "Italian," Walnut	0	0	10	0	1	4
Teak, per load (Rangoon or Moulmein)	25	0	0	31	0	0
Do., do. (Java)	22	0	0	25	0	0
American Whitewood planks, per ft. cube	0	6	0	0	7	0

Prepared Flooring, etc.—	Per square. £	s.	d.	£	s.	d.
1 in. by 7 in. yellow, planed and shot	0	14	6	0	18	0
1 in. by 7 in. yellow, planed and matched	0	14	9	0	18	0
1¼ in. by 7 in. yellow, planed and matched	0	17	6	1	3	0
1 in. by 7 in. white, planed and shot	0	14	0	0	16	0
1 in. by 7 in. white, planed and matched	0	14	3	0	16	6
1¼ in. by 7 in. white, planed and matched	0	16	6	0	18	6
¾ in. by 7 in. yellow, matched and beaded or V-jointed boards	0	12	6	0	15	0
1 in. by 7 in. „ „	0	15	0	0	18	6
¾ in. by 7 in. white „ „	0	12	0	0	14	0
1 in. by 7 in. „ „	0	14	6	0	16	6

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton. £	s.	d.	£	s.	d.
Rolled Steel Joists ordinary sections	9	0	0	10	0	0
Compound Girders, ordinary sections	11	0	0	12	0	0
Steel Compound Stanchions	12	0	0	13	0	0
Angles, Tees, and Channels, ordinary sections	11	0	0	12	0	0
Flitch Plates	11	0	0	12	0	0
Cast Iron Columns & Stanchions, including ordinary patterns	8	10	0	9	0	0

METALS.

IRON—	Per ton, in London. £	s.	d.	£	s.	d.
Common Bars	9	0	0	9	10	0
Staffordshire Crown Bars, good merchant quality	9	5	0	9	15	0
Staffordshire "Marked Bars"	11	0	0	—		
Mild Steel Bars	9	5	0	9	15	0
Hoop Iron, basis price	10	0	0	—		
„ „ Galvanised	17	10	0	—		

(* And upwards, according to size and gauge.)

Sheet Iron Black—						
Ordinary sizes to 20 g.	10	5	0			—
„ „ 24 g.	11	5	0			—
„ „ 26 g.	12	15	0			—
Sheet Iron, Galvanised, flat, ordinary quality—						
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15	10	0			—
Ordinary sizes to 22 g. and 24 g.	16	0	0			—
Ordinary sizes to 26 g.	17	0	0			—
Sheet Iron, Galvanised, flat, best quality—						
Ordinary sizes to 20 g.	18	10	0			—
„ „ 22 g. and 24 g.	19	0	0			—
Ordinary sizes to 26 g.	20	10	0			—
Galvanised Corrugated Sheets—						
Ordinary sizes, 6 ft. to 8 ft. 20 g.	15	0	0			—
Ordinary sizes, 22 g. and 24 g.	15	5	0			—
Ordinary sizes, 26 g.	16	15	0			—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12	10	0			—
Best Soft Steel Sheets, 22 g. & 24 g.	13	10	0			—
Best Soft Steel Sheets, 26 g.	15	10	0			—
Cut Nails, 3 in. to 6 in.	11	0	0	11	10	0

(Under 3 in., usual trade extras.)

LEAD, &c.

	Delivered in London. £	s.	d.			
LEAD—Sheet, English, 4 lb. and up	23	5	0			—
Pipe in coils	23	15	0			—
Soil pipe	26	15	0			—
Compo pipe	26	15	0			—
ZINC—Sheet—	In casks of 10 cwt.					
Vielle Montagne	28	0	0			—
Silesian	27	10	0			—
Zinc, in bundles, 1s. per cwt. extra.						
COPPER—						
Strong Sheet per lb.	0	1	1			—
Thin „ „	0	1	2			—
Copper nails „	0	1	1			—
Copper wire „	0	1	1			—
BRASS—						
Strong Sheet „	0	1	1			—
Thin „	0	1	2			—
TIN—English Ingots „	0	1	7			—
SOLDER—Plumbers' „	0	0	8			—
Tinmen's „	0	0	11			—
Blowpipe „	0	1	1			—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft. Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3½d.
„ fourths	2d.	32 oz. thirds	5½d.
21 oz. thirds	3½d.	„ fourths	4½d.
„ fourths	3d.	Fluted Sheet, 15 oz.	3d.
26 oz. thirds	4½d.	„ 21 oz.	4d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft. Delivered.

¼ Rolled plate	2½d.
⅜ Rough rolled and rough cast plate	2½d.
½ Rough rolled and rough cast plate	3d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3½d.
Ditto, tinted	5d.

* Not less than two crates.

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	2	3
„ „ „ in barrels	„	0	2	4
„ „ „ in drums	„	0	2	6
Boiled „ „ in barrels	„	0	2	6
„ „ „ in drums	„	0	2	9
Turpentine in barrels	„	0	2	10
„ in drums	„	0	3	0
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)		30	5	0
Red Lead, Dry	per ton	28	10	0
Best Linseed Oil Putty	per cwt.	0	9	0
Stockholm Tar	per barrel	1	12	0

VARNISHES, &c.

	Per gallon. £	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6
Fine Elastic Carriage	0	12	0
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	0	18	6
Extra Pale French Oil	1	1	0
Eggshell Plating Varnish	0	18	0
White Pale Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	0
Best Black Japan	0	16	6
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	0
French and Brush Polish	0	10	0

TERMS OF SUBSCRIPTION.

"THE BUILDER" (Published Weekly) is supplied DIRECT from the Office to residents in any part of the United Kingdom at the prepaid rate of 16s. per annum, with delivery by *Friday Morning's Post* in London and its suburbs.

To Canada, post-free, 21s. 8d. per annum; and to all parts of Europe, America, Australia, New Zealand, India, China, Ceylon, etc., 26s. per annum.

Remittances (payable to THE BUILDER LTD.) should be addressed to 4, Catherine-street, Aldwych, London W.C.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 6 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

ABERDEEN.—Alterations at the police department, Lodge-walk. Mr. W. Dyack, Surveyor, Town Hall, Aberdeen:—

Mason work: G. Duguid & Son* £970 0
Carpenter's work: Henry & Keith* 776 10

ABERTILLERY.—For alterations and extensions of the Queen-street Girls' School, for the Urban District Council. Mr. W. H. Hiley, architect, Chapel-street, Abertillery. Quantities by the architect:—

E. J. Skidmore £2,145 5
R. Tudor 1,927 10
J. Jones, Abertillery* 1,900 0

BROMLEY.—Wood-block paving in portions of four roads. Mr. Stanley Hawkings, Engineer, Town Hall, Bromley:—

	Inclusive price per yard super. s. d.
W. Griffiths & Co.	13 10
Improved Wood Pavement Co., Ltd.	13 3
J. Mowlem & Co.	13 7
Acme Flooring and Paving Co.	13 6
Fry Bros.	12 11

CANNOCK.—Supply and fixing safety staircases at Workhouse, for the Board of Guardians:—

Lion Foundry Co., Kirkcaldy* £132 2

CROYDON.—Sinking and boring duplicate well at the Waddon Water Works. Mr. George F. Carter, Engineer, Town Hall, Croydon:—

F. Smith & Son, Great Grimsby* £1,074 6 3

DONCASTER.—The Corporation has accepted the following tenders of construction of tramways:—

For permanent way construction, Warmsworth, J. W. Pearce & Co., Ltd., £7,700; for permanent way construction, Brodsworth, Edwards & Co., £10,433 18s. 2d.; for copper bonds, the British Insulated and Helsby Cables, Ltd., £341 18s. 4d.; for tie-bars, bolts, nuts, etc., Guest, Keen, & Nettlefolds, Ltd., £936 0s. 4d.; for points and crossings, Hatfield's, Ltd., £1,457.

EPSOM.—For whitewashing, painting, varnishing, etc., the Union Infirmary, for the Guardians. Mr. A. C. Williams, architect, 53, Doughty-street, London, W.C.:—

Roll & Taylor £440 0
C. Norrington 455 0
C. Longhurst & Sons 278 0
H. Skelton, Epsom* 269 4

EPPING.—Extension of the Roydon sewer, for the Rural District Council:—

J. Crook, Ware* £155 18 6

FULHAM.—Installation of hot-water apparatus, etc., at William-street School, Fulham, for the London County Council:—

Cannon & Hefford £869
Brightside Foundry and Engineering Co., Ltd. 867
H. J. Cash & Co., Ltd. 778
Palowkar & Sons 722
Strode & Co., Ltd. ... 685
J. & F. May £663
G. & E. Bradley 663
W. G. Cannon & Sons, Ltd. 659
Yetton & Brickett, Ltd. 645
R. H. & J. Pearson, Ltd., Notting Hill-gate* 556

GUILDFORD.—For erecting partitions and redecorating, for the Guildford, Godalming, and Woking Joint Hospital Board:—

T. Bishop* £137

HENSTEAD.—For erection of children's home at Poringland, for the Henstead Board of Guardians. Mr. J. B. Panks, architect, Framlington Pigot, Norwich:—

E. Baldwin £890 0
W. P. Horne 858 0
A. M. Dawson 850 0
A. W. English & Son 837 13
R. J. Dowe, Norwich* £810 0
D. Watling 684 0

HOVE.—For new street works in Glendale-road. Mr. Hugh Hamilton Scott, Surveyor, Town Hall, Hove:—

J. Parson & Sons‡ £247

‡ Recommended for acceptance.

HEMEL HEMPSTEAD.—For the erection of an isolation hospital at Bennett's End, Hemel Hempstead. Messrs. John Saxon Snell and Stanley M. Spoor, architects, 28, Great James-street, W.C. Quantities by Mr. Alfred R. Evans, Q.S.A., 11, Gray's Inn-place, W.C.:—

H. Peppiat & Cooper £7,118 8 0
A. Timberlake 6,682 0 0
Clark Bros. ... 6,530 0 0
J. Mead, Ltd... 6,374 0 0
R. Schooley & Son 6,359 0 0
C. Brightman & Son, Ltd. ... £6,273 0 0
T. Higgs 5,997 10 6
G. Henson & Son 5,990 0 0
C. Miskin & Sons, Ltd., St. Albans* ... 5,989 0 0

LONDON.—For general repairs and redecorations at two libraries, and new shelving at the Durning Library, Lambeth. Mr. H. C. J. Edward, Borough Engineer, Town Hall, Lambeth:—

	Durning Library.	North Lambeth Library.	Total.
J. Parsons	£339	£295 0	£634 0
W. Palmer	410	142 0	552 0
Lapthorne & Co., Ltd.	526	277 0	803 0
E. W. Janes	289	163 0	452 0
F. & H. F. Higgs	525	118 0	643 0
Hibbert Bros., Ltd.	548	298 0	846 0
G. Candler & Sons, Brixton	499	112 0‡	611 0
W. Bugg & Sons, West Norwood	394‡	123 5	517 5

‡ Recommended for acceptance.

LONDON.—Painting work at parks and open spaces, for the London County Council:—

Archbishop's Park, F. W. Fletcher* ... £87 0
Avery Hill, Thomas & Edge* 97 10
Brockwell Park, F. W. Fletcher* 237 0
Chelsea Embankment Gardens, F. W. Fletcher* 56 10
Finsbury Park, Marchant, Hirst, & Co.* 180 0
Hilly Fields, N. Harris & Son* 125 0
Horniman Gardens, H. Line* 88 0
Millbank Gardens, W. King & Sons* ... 54 0
Wandsworth Common, F. W. Fletcher* 91 10

LONDON.—For installing low-pressure hot-water apparatus at the Victoria School, Hammersmith, for the London County Council:—

Arding & Dyne £993 0 0
Wilson & Smith, Ltd. 899 10 0
E. Deane & Beal, Ltd. 840 0 0
Brightside Foundry and Engineering Co., Ltd. 831 0 0
Palowkar & Sons 830 0 0
W. J. Burroughes & Sons 825 0 0
Cannon & Hefford 822 10 0
H. J. Cash & Co., Ltd. 784 0 0
Yetton & Brockett, Ltd. 770 0 0
W. G. Cannon & Sons, Ltd. 738 0 0
J. & F. May, 33, Whetstone Park, Lincoln's Inn-fields* 753 0 0
R. H. & J. Pearson, Ltd. 657 0 0

LEYTON.—For cleansing, painting, and alterations to various schools, for the Urban District Council. Mr. William Jacques, architect, 2, Fen-court, Fenchurch-street, E.C.:—

School Cleansing.

	Capworth-street, Interior.	Downsell-street, Interior.	Farmer-road, Exterior.	Ruckholt-road, Interior.	Sybourn-street, Temporary Exterior.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
S. Blow, Ltd.	396 0 0	—	219 19 0	376 0 0	66 10 0
F. J. Coxhead	—	439 0 0	223 0 0	434 0 0	92 0 0
H. C. Horswill, Forest Gate	*354 0 0	335 0 0	226 0 0	345 0 0	92 0 0
Kind & Co.	—	—	—	—	75 0 0
W. J. Maddison	—	427 0 0	—	—	—
G. H. Smith, City	369 0 0	—	209 0 0	—	*54 0 0
A. Webb	—	355 0 0	—	—	—
A. J. Wick	361 18 0	—	226 10 0	—	80 15 0
Woolaston & Co., Limehouse	365 0 0	*344 0 0	*175 0 0	*325 0 0	88 0 0

Improvements to Latrines.

	Downsell-road.	Mayville-road.	Kirkdale-road.
	£ s. d.	£ s. d.	£ s. d.
F. J. Coxhead	69 0 0	396 10 0	
H. C. Horswill, Forest Gate	*63 0 0	372 0 0	41 0 0
Kind & Co.	64 10 0	—	47 10 0
W. J. Maddison	65 0 0	365 0 0	43 0 0
Tagg & Son, Leytonstone	—	—	*29 10 0
A. Webb	79 10 0	329 10 0	39 0 0
Woolaston & Co., Limehouse	65 0 0	*310 0 0	—

	Tar-paving Playgrounds, Church-road.	Repairs to Tar-paving.	
		Ruckholt-road.	Newport-road.
	£ s. d.	£ s. d.	£ s. d.
Chittenden & Simmons	441 6 7	131 14 11	23 8 5
Constable, Hart, & Co.	395 7 0	114 2 0	23 7 0
General Paving Co.	590 0 0	147 0 0	34 0 0
Permanite, Ltd.	493 10 6	107 10 1	14 18 2
Sheppard & Co., Peckham	*378 0 0	*85 0 0	*16 0 0
Smart & Son	452 0 0	118 0 0	25 15 0

Repairs to Heating Apparatus.

	Farmer-road.	Norlington-road.	Trumpington-road.
	£ s. d.	£ s. d.	£ s. d.
F. Davies, Leytonstone	*61 0 0	*58 0 0	75 0 0
J. T. Halsey	73 7 6	66 7 6	74 18 6
R. Stubbs	82 15 0	98 5 0	81 10 0
Watkins & Son, Wood Green	71 10 0	60 0 0	*70 0 0

LONDON.—Erection of new sessions house, for the London County Council:—

	Amount of Tender for Execution of Work During Period of		
	21 Months.	16 Months.	12 Months.
	£	£	£
W. E. Blake & Co., Fulham*	98,980	103,980	108,980
G. E. Wallis & Sons	99,784	—	—
Leslie & Co., Ltd.	100,667	103,735	111,735
W. Lovatt & Sons, Ltd.	101,095 (24 working months)	—	—
G. Godson & Sons	101,797	111,797	—
Foster & Dicksee, Ltd.	102,688	—	—
C. Wall, Ltd.	103,000	—	—
Holliday & Greenwood	103,590	—	—
J. Carmichael	104,507	104,507	105,507
W. Lawrence & Sons	105,440	109,000	—
Holloway Bros. (London), Ltd.	105,800	—	—
W. Downs	107,789	108,589	110,225
Holland & Hannen & Cubitts, Ltd.	108,988	113,388	—
Higgs & Hill, Ltd.	110,880	—	—

LONDON.—For incorporation of land in the site of the Heywood-street School, Clapham, for the London County Council:—

F. & G. Foster	£1,499	Holliday & Greenwood, Ltd.	£1,060
T. Hooper & Son	1,350	H. & E. Lea	1,056
W. F. Blay, Ltd.	1,228	Triggs & Co.	1,042
F. Smith & Co.	1,227	F. W. Fletcher, 4, Maybury-street, Tooting*	880
W. King & Son	1,174		
Rice & Son	1,163		
Lole & Co	1,138		
H. H. Hollingsworth	1,073		

LONDON.—For new shelving at the Tate Central Library, Lambeth. Mr. H. C. J. Edward, Engineer, Town Hall, Lambeth:—

Estler Bros.‡	£835 18	J. Parch	£700 0
J. P. White & Sons, Ltd.	775 0	A. Coldman & Son	698 0
W. Palmer	750 0	Hampton & Sons, Ltd.	694 0
J. Parsons	749 0	Lavington, Ltd., Lansdowne Works, Clapham-road, S.W.‖	600 0
Lapthorne & Co., Ltd.	735 0		
Hibberd Bros., Ltd.	717 0		

‡ Steel shelving instead of timber specified.
‖ Recommended for acceptance.

LONDON.—For additional lavatory accommodation and new club room at Hoxton Baths, for the Shoreditch Borough Council:—

W. Thomerson & Son, Ltd.	£202 10
P. Kerridge	199 0
E. Lawrance & Sons, Ltd.	193 0
J. Jarvis & Sons, Ltd.‡	185 0

‡ Recommended for acceptance.

LONDON.—For painting and decorating Hoxton Library, for the Shoreditch Borough Council:—

J. Jarvis & Sons, Ltd.	£432 0 0
W. Gibbons	431 10 0
Higgs & Hill	398 0 0
General Building Co.	384 6 6
F. B. Self	375 4 2
De Jong & Co., Ltd.	338 0 0
Markham & Markham	335 0 0
P. Kerridge*	333 8 0
Arding & Hobbs	321 9 4

NEWPORT (Mon.).—Construction of sewers, etc., for the Town Council:—

W. E. Evans	£9,821

OSWESTRY.—For slaughter-house, at the Smithfield. Mr. G. W. Lacey, M.Inst.M.C.E., Borough Surveyor:—

Jones & Evans	£157 10	W. H. Thomas & Sons, Ltd., Salop-road, Oswestry*	£125 0
J. Higgins	150 0		

[Borough Surveyor's estimate, £125.]

PORTHLEVEN.—For erection of new drill hall. Mr. J. W. Braod, architect, Porthleven:—

Bowden	£1,005	Ruberry & Sons	£780
Broad & Mitchell	789	N. J. Jory, Hayle*	680

ROTHERHAM.—For roof glazing work at the car sheds. Mr. E. B. Martin, Engineer, Town Hall, Rotherham:—

Mellos & Co., Sheffield*	£384 12 10

SITTINGBOURNE.—For erection of consumptive pavilion, for the Sittingbourne and Milton Joint Hospital Board:—

T. Monk	£2,796	Pavey & Sons	£2,605
E. Bishop & Sons	2,695	G. Bowes & Sons*	2,584

SIX MILE BOTTOM.—Alterations at the Council school, for the Cambridgeshire Education Committee:—

Negus & Son	£671 0	H. E. Ambrose, Cambridge*	£588 8
Mason & Son	662 10		

STAFFORD.—For Blythe Bridge improvement, for the Stafford Rural District Council:—

Hobrough & Co., Gloucester*	£1,176 9 7

WALTHAMSTOW.—For sundry renovation of school buildings in painting, colouring, etc., for the Education Committee. Mr. H. Prosser, M.S.A., Architect to the Committee:—

Winns-avenue Schools.

S. Blow, Ltd.	£674 0 0	H. F. Webb & Co.	£450 0 0
A. G. Barton	532 0 0	Rowlett Bros.	447 7 6
D. W. Lucas	517 0 0	J. Sands, Walthamstow*	440 0 0
A. J. Wick	489 0 0		

Markhouse-road Schools.

A. J. Wick	£168 12	H. F. Webb & Co.	£118 0
A. G. Winters	165 15	J. Sands	104 0
Rowlett Bros.	145 0	F. E. McBride	97 18
J. & J. Dean	138 0	A. G. Barton, Walthamstow*	97 0
D. W. Lucas	135 0		
S. Blow, Ltd.	133 0		

Shernhall-street Special School.

S. Blow, Ltd.	£45 0	E. Fuller & Sons	£28 0
A. G. Winters	38 10	J. Sands	25 0
J. & J. Dean	36 10	A. G. Barton	25 0
H. F. Webb & Co.	35 0	F. E. McBride, Walthamstow*	21 17
D. W. Lucas	31 0		
Rowlett Bros.	28 15		

St. Saviour's Schools.

A. G. Barton	£108 0	F. E. McBride	£121 0
S. Blow, Ltd.	148 0	J. Sands	110 0
D. W. Lucas	135 0	E. Fuller & Sons	108 0
Rowlett Bros.	126 15	A. J. Wick, Walthamstow*	104 16
H. F. Webb & Co.	125 0		

WANDSWORTH.—For installing electric lighting, bells, and telephones at the Furzedown Training College and Hostels, Wandsworth, for the London County Council:—

F. Hodgson & Co.	£2,800 0 0
C. H. Cathcart & Co.	2,425 0 0
Buchanan & Curwen	2,065 0 0
Cox-Walkers, Ltd.	1,995 0 0
Malcolm & Allan, Ltd.	1,761 0 0
Alpha Manufacturing Co.	1,746 0 0
Tredegar & Co.	1,729 0 0
Defries & Goldman	1,565 0 0
Lund Bros. & Co.	1,539 0 0
G. Weston & Sons, Ltd.	1,503 0 0
A. Newman, Ltd.	1,499 0 0
Tyler Apparatus Co., Ltd.	1,283 11 6
Turnham & Co., 12, John-street, Adelphi*	1,050 0 0

WESTLEY WATERLESS.—Alteration to school, for the Cambridgeshire Education Committee:—

Negus & Son	£199	H. E. Ambrose, Cambridge*	£111
Mason & Son	180		

WESTON COLVILLE.—Alterations to school, for the Cambridgeshire Education Committee:—

Mason & Son	£490	H. E. Ambrose, Cambridge*	£376
Negus & Son	398		

WIGAN.—Erection of girls' high school, for the Corporation:—

J. Johnson & Sons*	£10,690

WIMBLEDON.—Surfacing "Parkside" with Duromac. Mr. C. H. Cooper, Surveyor, Town Hall, Wimbledon:—

London Asphalte Co., Ltd., Finsbury-pavement House, E.C.*	£5,330

YEOVIL.—Erection of four houses at Tintenhull, for the Yeovil Rural District Council:—

E. F. Bascombe, Wimborne*	£764

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